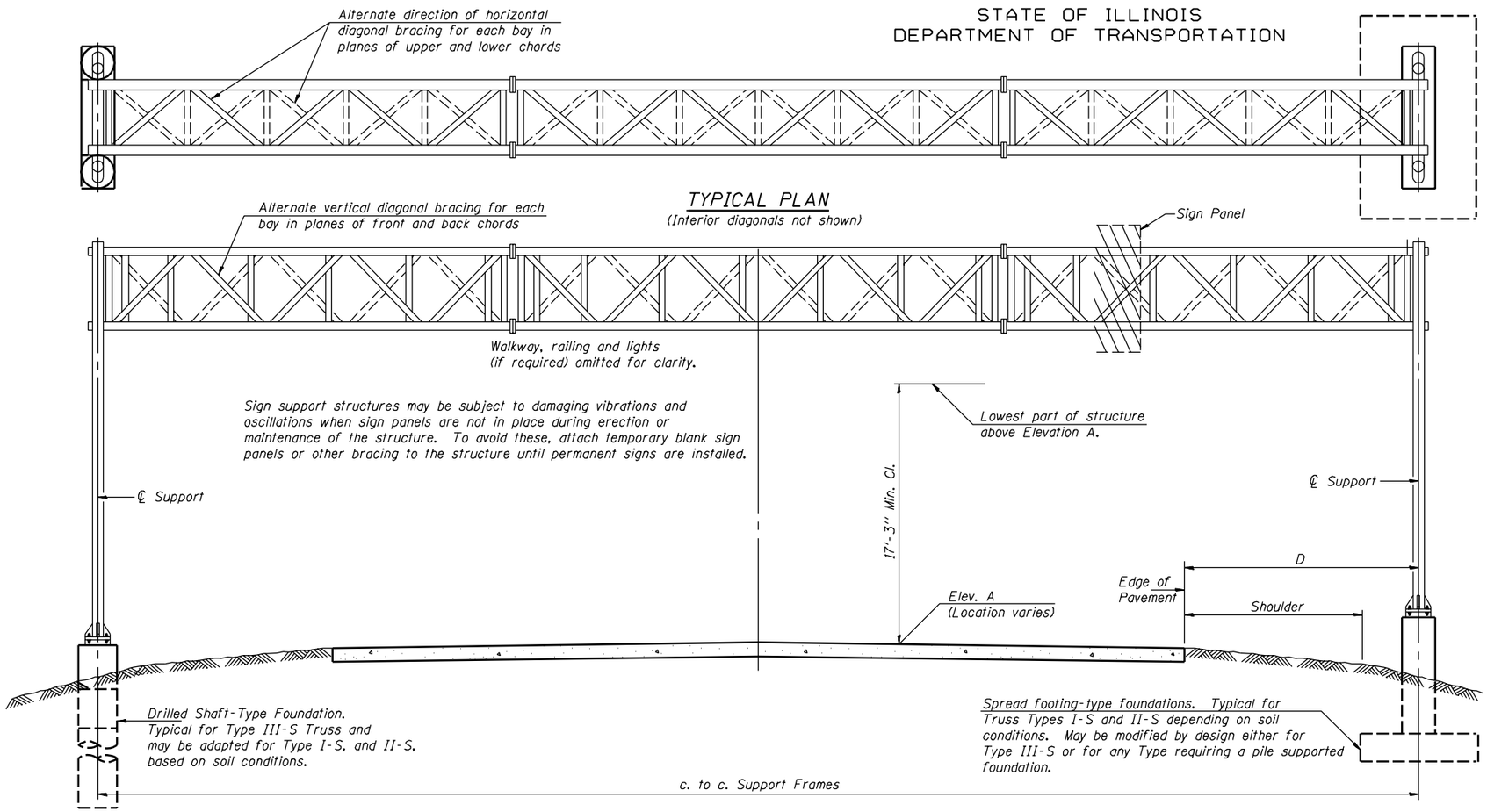
CELL / MODEL NAME	DESCRIPTION	DATE
OS-S-1	General plan and elevation, steel truss and steel supports	7/1/2006
OS-S-2	Steel truss details truss type I-S, II-S and III-S	7/1/2006
OS4-S-2	Steel truss details truss type I-S, II-S and III-S	7/1/2006
OS-S-D	Damping device	7/1/2006
OS-S-3	6" Dia. Pipe support frame for type I-S steel truss	7/1/2006
OS-S-3A	6" Dia. Pipe support frame details	7/1/2006
OS-S-4	8" Dia. Pipe support frame for steel truss	7/1/2006
OS-S-4A	8" Dia. Pipe support frame details	7/1/2006
OS-S-6	10" Dia. Pipe support frame for steel truss	7/1/2006
OS-S-6A	10" Dia. Pipe support frame details	7/1/2006
OS4-S-8a	12" Dia. Pipe support frame for type III-S steel truss	7/1/2006
OS4-S-8aA	12" Dia. Pipe support frame details	7/1/2006
OS-S-9	Steel walkway details	7/1/2006
OS-S-9-DMS	Alternate steel walkway details for DMS	7/1/2006
OS-S-9S	Alternate steel walkway details	7/1/2006
OS-S-10	Steel walkway details	7/1/2006
OS-S-10-DMS	Alternate steel walkway details for DMS	7/1/2006
OS-S-10S	Alternate steel walkway details	7/1/2006
OS-S-11	Steel handrail details	7/1/2006
OS-S-11-DMS	Alternate steel handrail details for DMS	7/1/2006

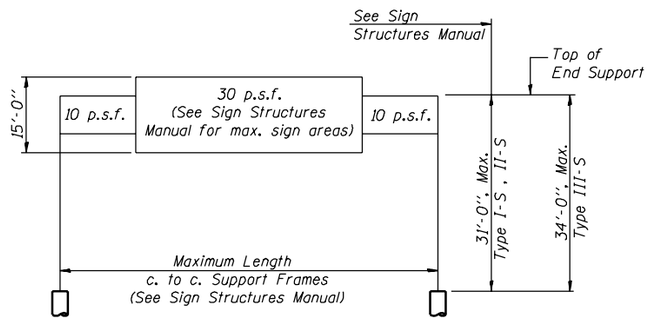
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #





DESIGN WIND LOADING DIAGRAM

Parameters shown are basis for I.D.O.T. Standards and Sign Manual Tables. Installations not within dimensional limits shown require special analysis for all components.

TYPICAL ELEVATION

(Looking at Face of Signs**)

Elev. A = Elevation at point of minimum clearance to sign, walkway support or truss.

Structure Number	Station	Design Truss Type	c. to c. Supports	Elev. A	Dim. D	Height of Tallest Sign	Total Sign Area

**Looking upstation for structures with signs both sides.

GENERAL NOTES

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals. ("AASHTO Specifications")

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, Supplemental Specifications and Special Provisions. ("Standard Specifications")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

ALLOWABLE UNIT STRESSES:
Structural Steel - 20,000 p.s.i.
Reinforcing Steel - 20,000 p.s.i.
Class SI Concrete - 1,400 p.s.i.
Allowable unit stresses due to wind load in combination with other forces, are increased 1.33

MINIMUM CLEARANCE: Vertical Roadway Clearance = 17'-3" (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Specificiations.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53.

All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 or Gr. 50W* (M183, M223 Gr. 50 or M222). Stainless steel for handhole covers shall be ASTM A240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer.

The steel pipe and stiffening ribs at the base plate for the column shall have a minimum longitudinal Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. (Zone 2) before galvanizing.

FASTENERS FOR STEEL TRUSSES: All bolts noted as "high strength" (HS) must satisfy the requirements of AASHTO M164 (ASTM A325), ASTM A449, or an Engineer approved alternate, and must have matching lock nuts and washers. All bolts, u-bolts, eye bolts, lock nuts and washers not specified to be "high strength" must satisfy the requirements of ASTM A307 Gr B. All lock nuts must have nylon or steel inserts. High strength bolt installation shall conform to Article 505.04 (f) (2)d of the Standard Specifications. Rotational capacity ("ROCAP") testing will not be required. All bolts, locknuts and washers must be hot dip galvanized per AASHTO M232.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111.

ANCHOR RODS: Shall conform to AASHTO M314 Gr. 36, 55 or 105 with a minimum Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F.

CONCRETE SURFACES: All concrete surfaces above an elevation 6" below the lowest final ground line at each foundation shall be cleaned and coated with Bridge Seat Sealer in accordance with the Standard Specifications.

REINFORCEMENT BARS: Reinforcement Bars designated (E) shall be epoxy coated in accordance with the Standard Specifications.

FOUNDATIONS: The contract unit price for "Concrete Foundations" or "Drilled Shaft Concrete Foundations" shall include: All necessary excavation or drilling (except in rock); backfilling with excavated material; disposal of unsuitable or surplus material; formwork; and furnishing and placing the Class SI Concrete, reinforcement bars, conduit, anchor bolts, nuts, washers and ground rods complete in place.

* If M270 Gr. 50W (M222) steel is proposed, chemistry for plate to be used shall first be approved by the Engineer as suitable for galvanizing and welding.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
OVERHEAD SIGN STRUCTURE SPAN TYPE I-S	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE II-S	Foot	
OVERHEAD SIGN STRUCTURE SPAN TYPE III-S	Foot	
OVERHEAD SIGN WALKWAY TYPE S	Foot	
CONCRETE FOUNDATIONS	Cu. Yds.	
DRILLED SHAFT CONCRETE FOUNDATIONS	Cu. Yds.	

NUMBER	REVISION	DATE

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-S-1 7/01/2006

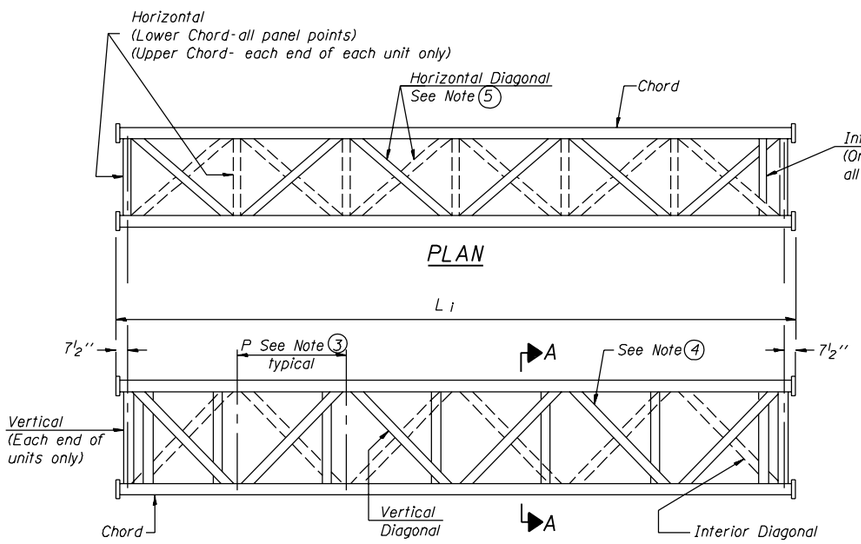
OVERHEAD SIGN STRUCTURES
GENERAL PLAN & ELEVATION
STEEL TRUSS & STEEL SUPPORTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

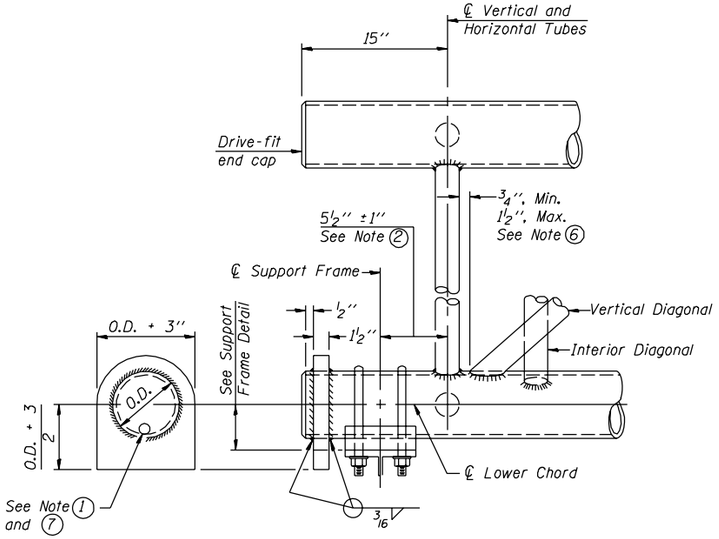
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

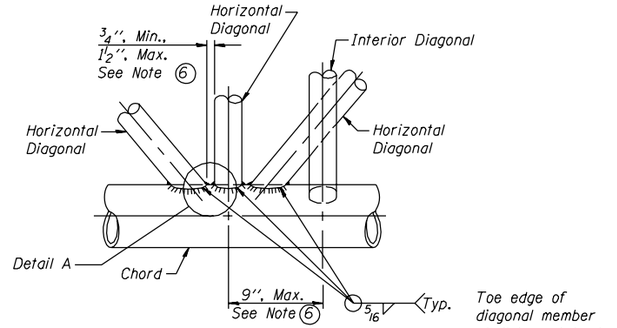
Contract #



ELEVATION
TYPICAL INTERIOR UNIT
Even number of panels/interior unit required.

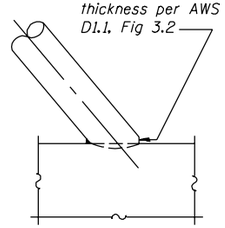


SUPPORT END DETAIL FOR EXTERIOR UNIT

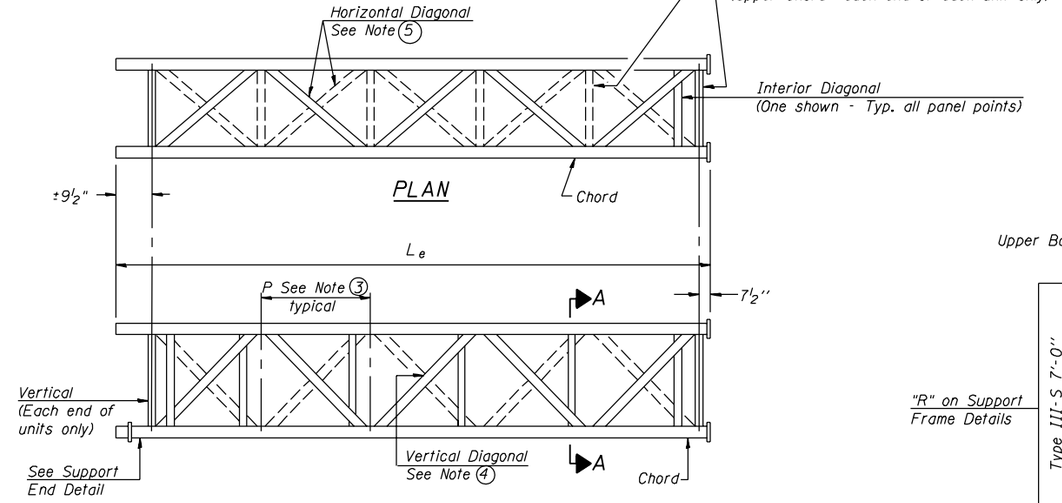


TYPICAL JOINT DETAILS

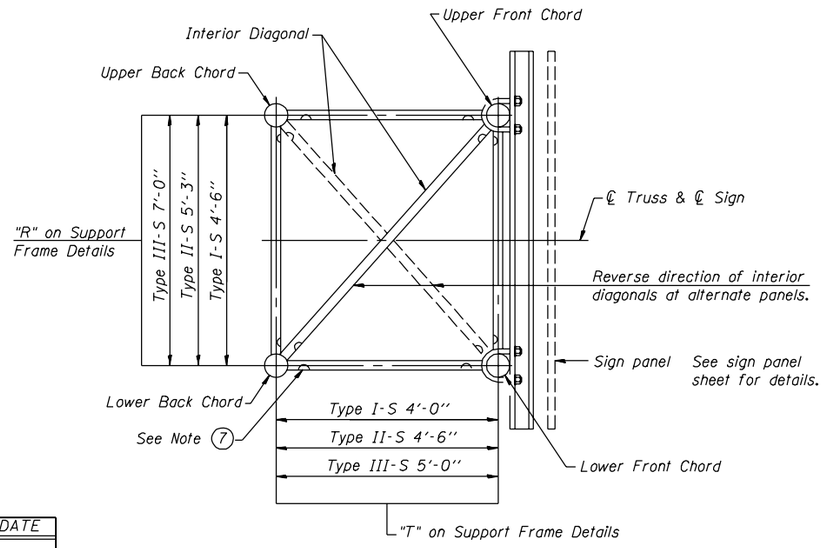
Toe edge of diagonal member shall be cut back to facilitate throat thickness per AWS D1.1, Fig 3.2



DETAIL A



ELEVATION
TYPICAL EXTERIOR UNIT
Even or odd number of panels/exterior units allowed.



SECTION A-A
(Vertical and horizontal diagonals not shown)

NOTES

(1) Contractor must use standard drive-fit cap to close end. ½" ϕ drain hole in drive-fit cap installed after galvanizing. (Typ. at non-splice ends of chords)

(2) 5½" end dimension may vary by ±1" to provide uniform panel spacing (P).

(3) Panel spacing (P) shall be uniform for entire truss and between 4'-0" and 5'-0" for Type I-S or 4'-0" and 5'-6" for Types II-S and III-S.

(4) Vertical Diagonals in front and back face shall alternate inclination.

(5) Hidden lines show wind bracing alternates direction between planes of top and bottom chords.

(6) All diagonals shall be offset from the panel point based on the following: offset shall provide a ¾" minimum to 1½" maximum clearance between diagonal and any other diagonal, horizontal or vertical member, and to provide clearance for U-bolt connections of signs or walkway brackets.

(7) Galvanizing vent holes of adequate size shall be provided on underside at each end of truss members except chords. Alternately, holes may be provided in wall of chords. All vent holes shall be drilled and de-burred, typ.

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-S-2 7/01/2006

OVERHEAD SIGN STRUCTURES
STEEL TRUSS DETAILS
FOR TRUSS TYPES I-S, II-S and III-S

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

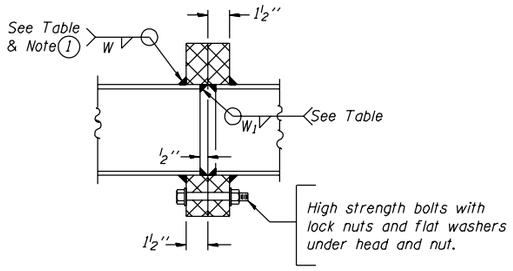
SHEET NO. -
- SHEETS

Contract #

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

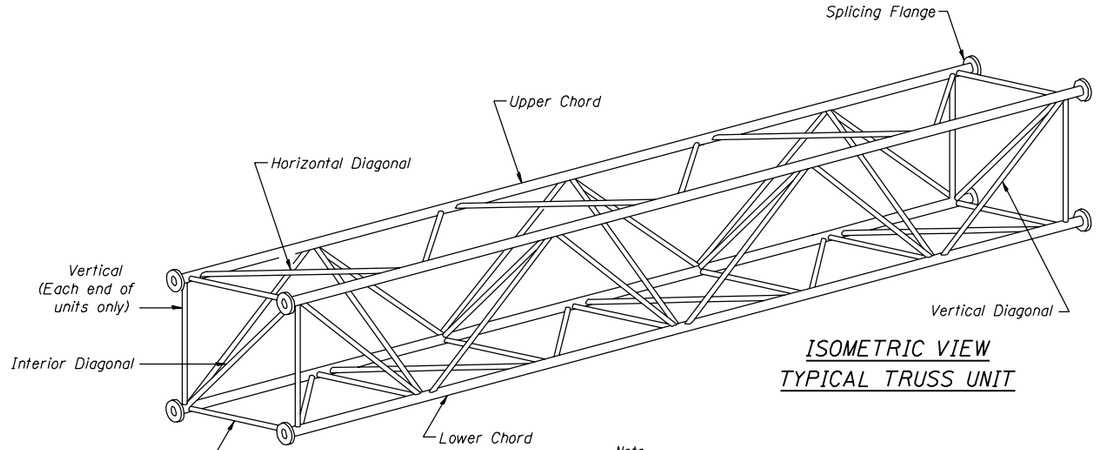
TRUSS UNIT TABLE

Structure Number	Station	Design Truss Type	Exterior Units (2)			Interior Unit				Upper & Lower Chord		Verticals; Horizontals; Vertical, Horizontal, and Interior Diagonals		Camber at Midspan	Splicing Flange					
			No. Panels per Unit	Unit Lgth.(L_e)	Panel Lgth.(P)	No. Req'd.	No. Panels per Unit	Unit Lgth.(L_i)	Panel Lgth.(P)	O.D.	Wall	O.D.	Wall		H.S. Bolts		Weld Sizes		A	B
															No./Splice	Dia.	W	W_1		



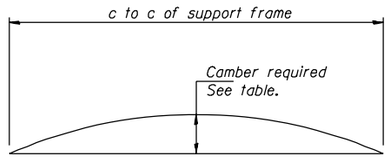
SECTION B-B

(1) Splicing Flanges shall be attached to each truss unit with the truss shop assembled to camber shown. Truss units shall be in proper alignment and flange surfaces shall be shop bolted into full contact before welding. Sufficient external welds or tacks shall be made to secure flanges until remaining welds are made after disassembly. Adjacent flanges shall be "match marked" to insure proper field assembly.



ISOMETRIC VIEW
TYPICAL TRUSS UNIT

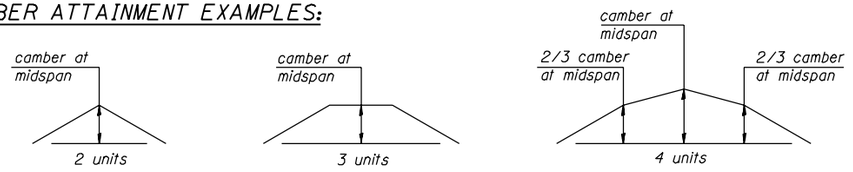
Note:
Units shall be shipped individually with adequate provision to prevent detrimental motion during transport. This may require ropes between horizontals and diagonals or energy dissipating (elastic) ties to the vehicle. The Contractor is responsible for maintaining the configuration and protection of the units.



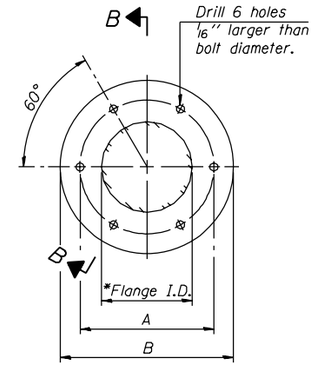
CAMBER DIAGRAM

Camber curve shown is theoretical. Actual camber attained by slope changes at splices between units.

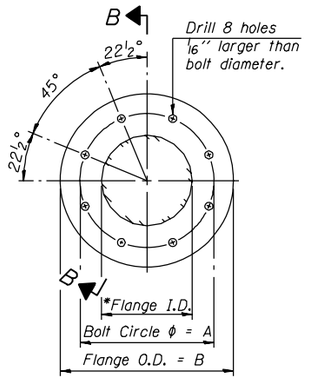
CAMBER ATTAINMENT EXAMPLES:



Camber shown is for fabrication only, measured with truss fully supported. (No-load condition)



TRUSS TYPES I-S, II-S, & III-S



TRUSS TYPES II-S & III-S

SPLICING FLANGES

*To fit O.D. of Chord with maximum gap of 1/16''.

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS4-S-2 7/01/2006

OVERHEAD SIGN STRUCTURES
STEEL TRUSS DETAILS
FOR TRUSS TYPES I-S, II-S and III-S

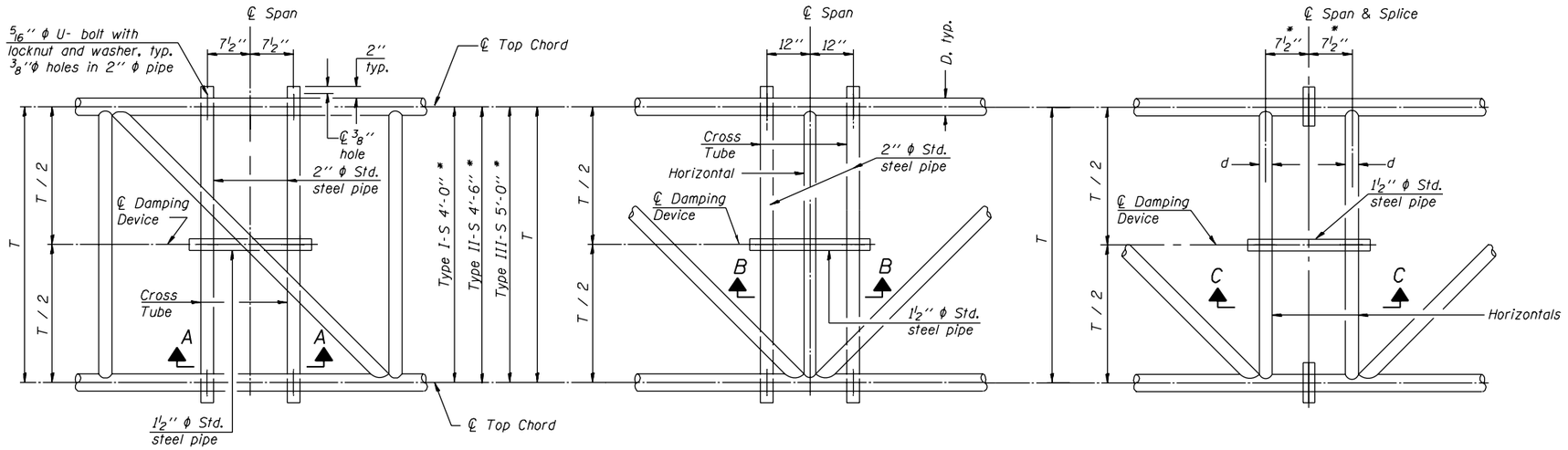
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Center of horizontal to center of splice dimension may vary. Verify before drilling holes in mounting tube.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

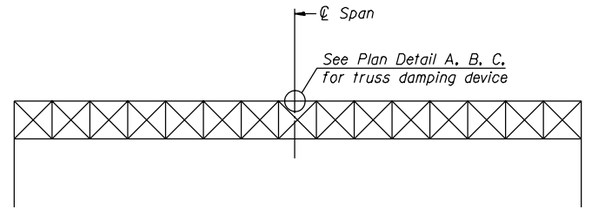
Contract #



PLAN DETAIL "A"
℄ Span between panel points

PLAN DETAIL "B"
℄ Span at panel point

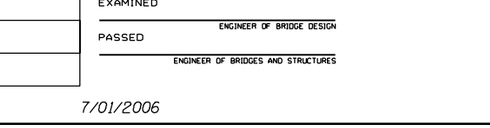
PLAN DETAIL "C"
℄ Span at ℄ chord splice



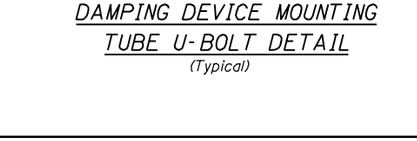
ELEVATION
Steel Overhead Sign Truss

NOTES

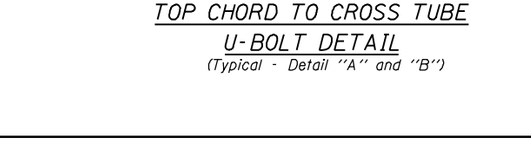
Damper: One damper per truss. (31 lbs. Stockbridge-Type) Cost included in Overhead Sign Structure...



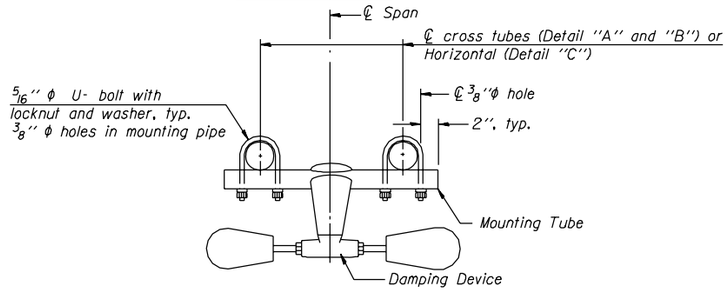
SECTION A-A



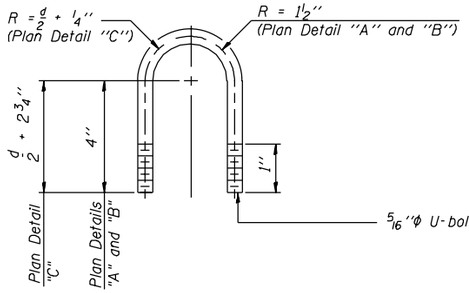
SECTION B-B



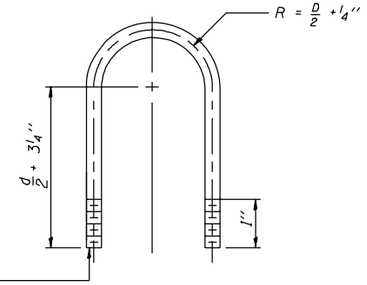
SECTION C-C



TRUSS DAMPING DEVICE CONNECTION DETAIL
(Typical)



DAMPING DEVICE MOUNTING TUBE U-BOLT DETAIL
(Typical)



TOP CHORD TO CROSS TUBE U-BOLT DETAIL
(Typical - Detail "A" and "B")

OVERHEAD SIGN STRUCTURE
DAMPING DEVICE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

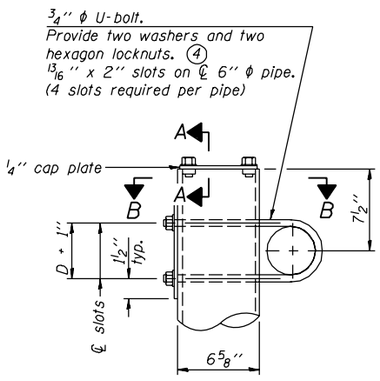
OS-S-D 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

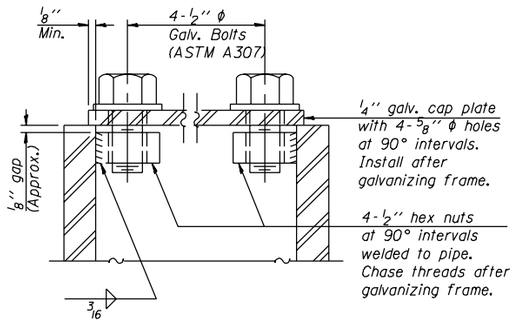
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. -
- SHEETS

Contract #

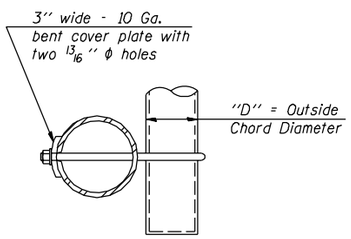


DETAIL A

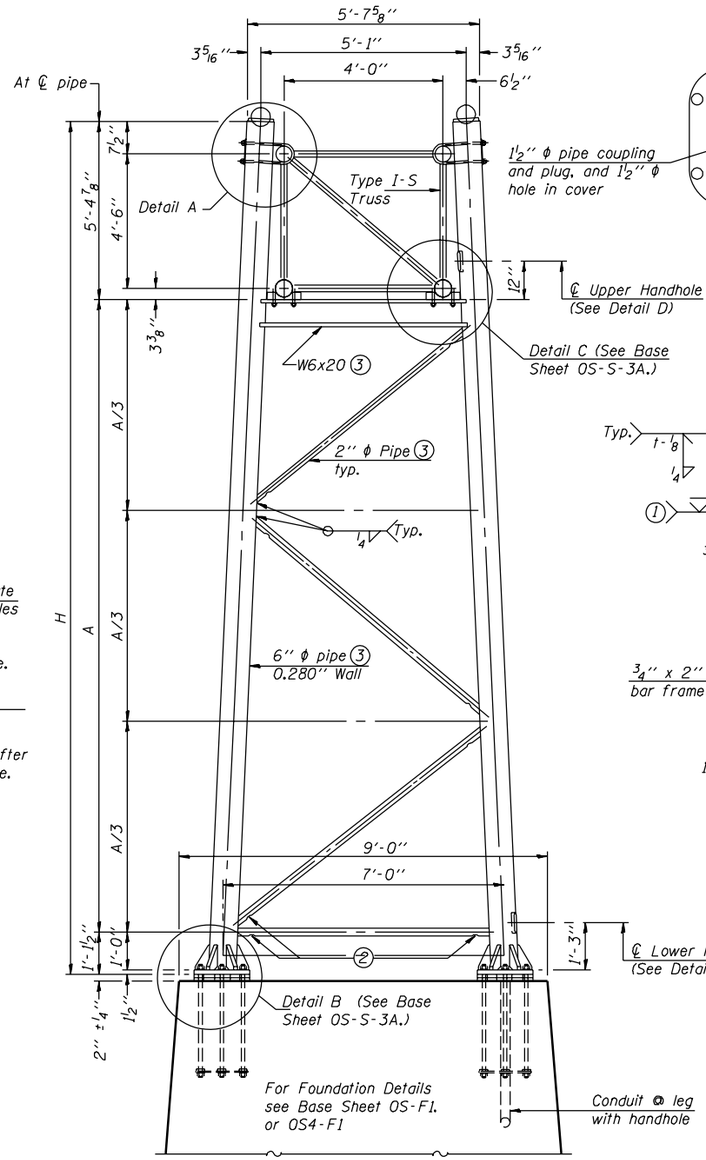


SECTION A-A

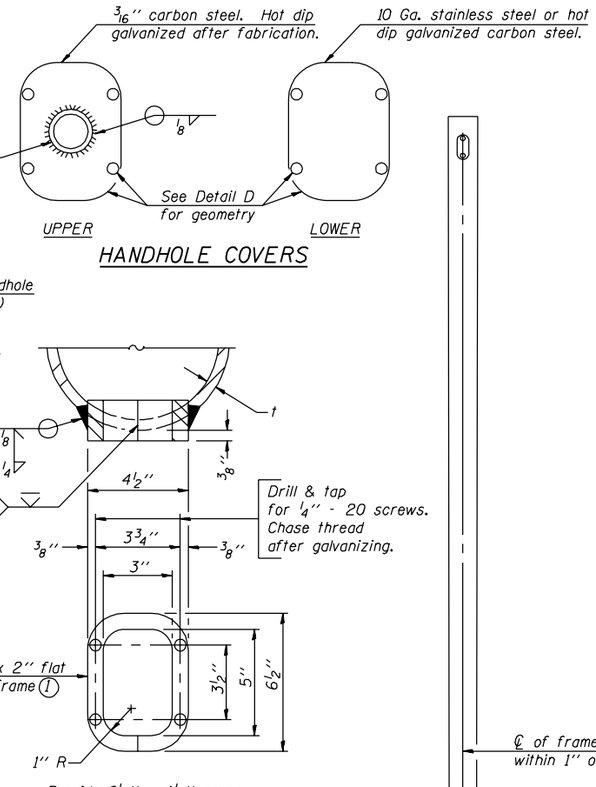
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



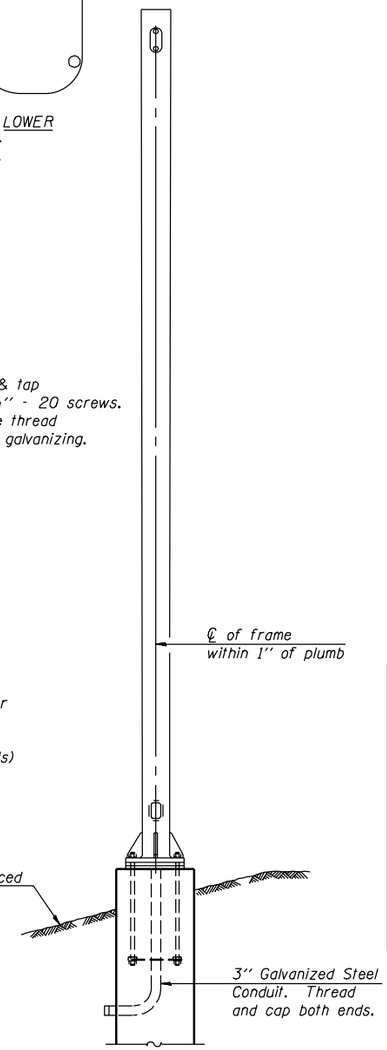
SIDE ELEVATION



HANDHOLE COVERS

Provide 6 1/2" x 4 1/2" cover. Provide 4-5/16" ϕ holes in cover for 1/4"-20 round head hot dip galvanized or stainless steel machine screws. (See cover details)

DETAIL D



END ELEVATION

Support Design Loads:
See Base Sheet OS-S-1 for design and loading criteria.

Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2" plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-S-1.

(4) See General Notes for fasteners.

(5) This standard may be utilized for special short span and/or short end support applications subject to verification of maximum loads and capacities by the designer.

(6) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(7) "H" based on 15'-0" or actual sign height, whichever is greater.

Structure Number	Station	Support		H (7)	A
		Left	Right		

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR TYPE I-S STEEL

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

6"ϕ PIPE TRUSS SUPPORT DETAILS

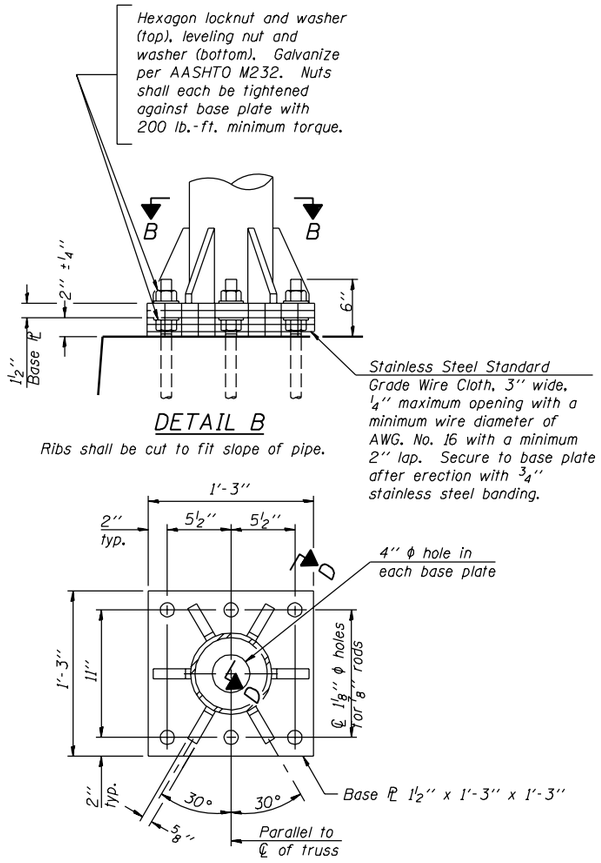
OS-S-3 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

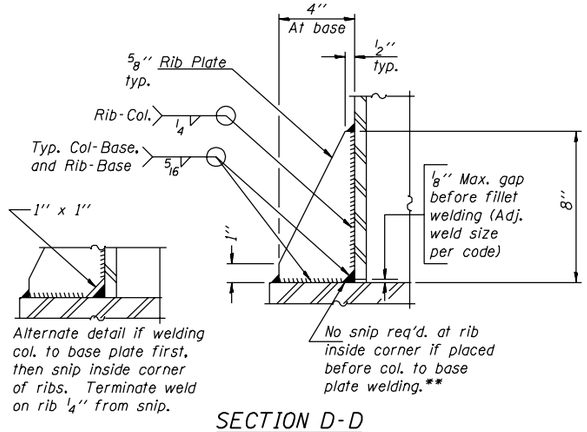
Contract #



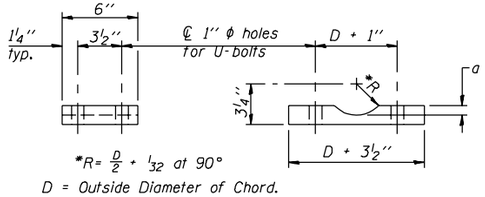
DETAIL B

Ribs shall be cut to fit slope of pipe.

SECTION B-B

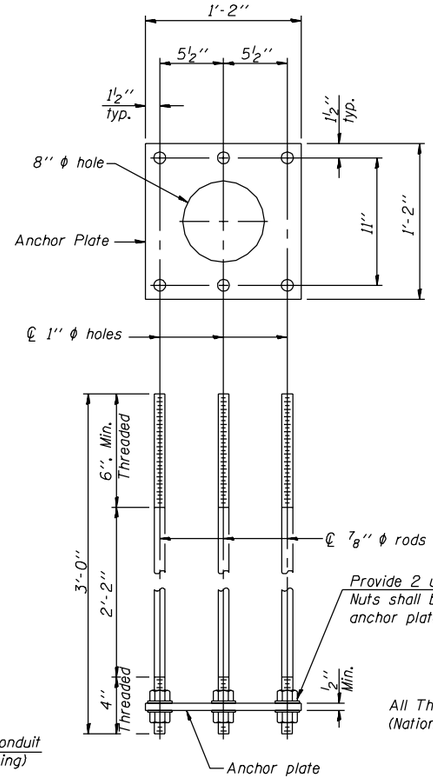


SECTION D-D

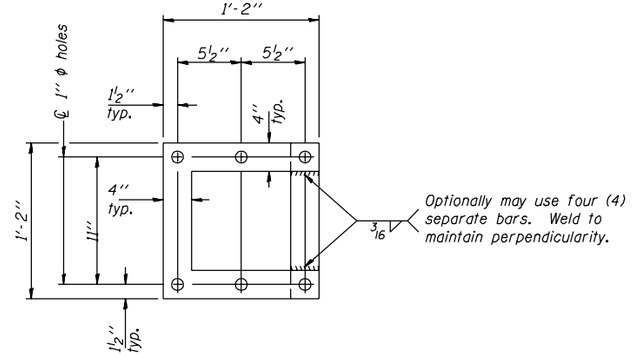


SADDLE SHIM DETAIL

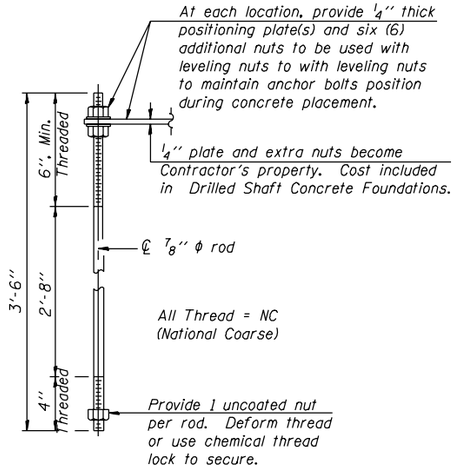
Truss Chord Nominal Dia.	a
4 1/2''	11/16''
5''	3/4''
5 1/2''	13/16''



ANCHOR ROD DETAIL
Spread Footing Foundation

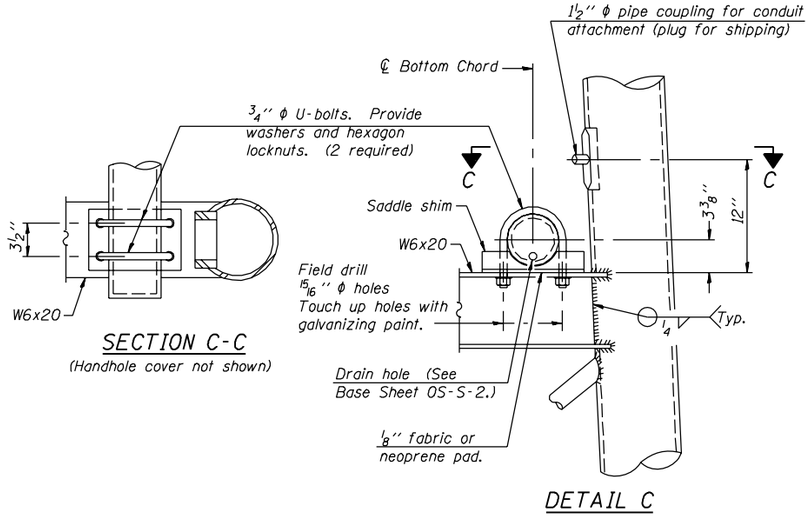


POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Drilled Shaft Foundation

Anchor rods shall conform to AASHTO M314 Grade 36, 55 or 105 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C
(Handhole cover not shown)

DETAIL C

TYPE I-S STEEL TRUSS
6'' ϕ PIPE SUPPORT FRAME DETAILS

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-S-3A 7/01/2006

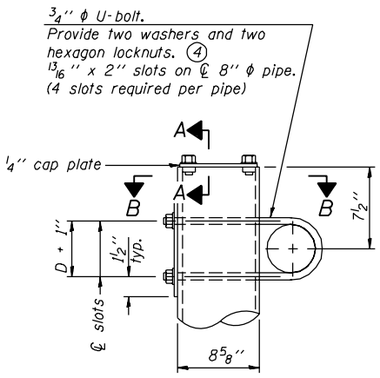
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE I-S STEEL TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

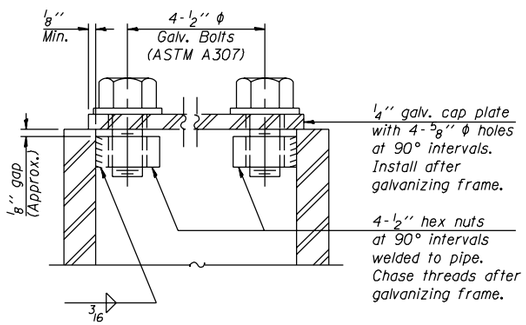
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

Contract #

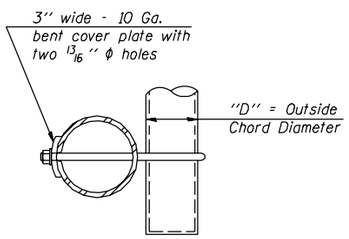


DETAIL A

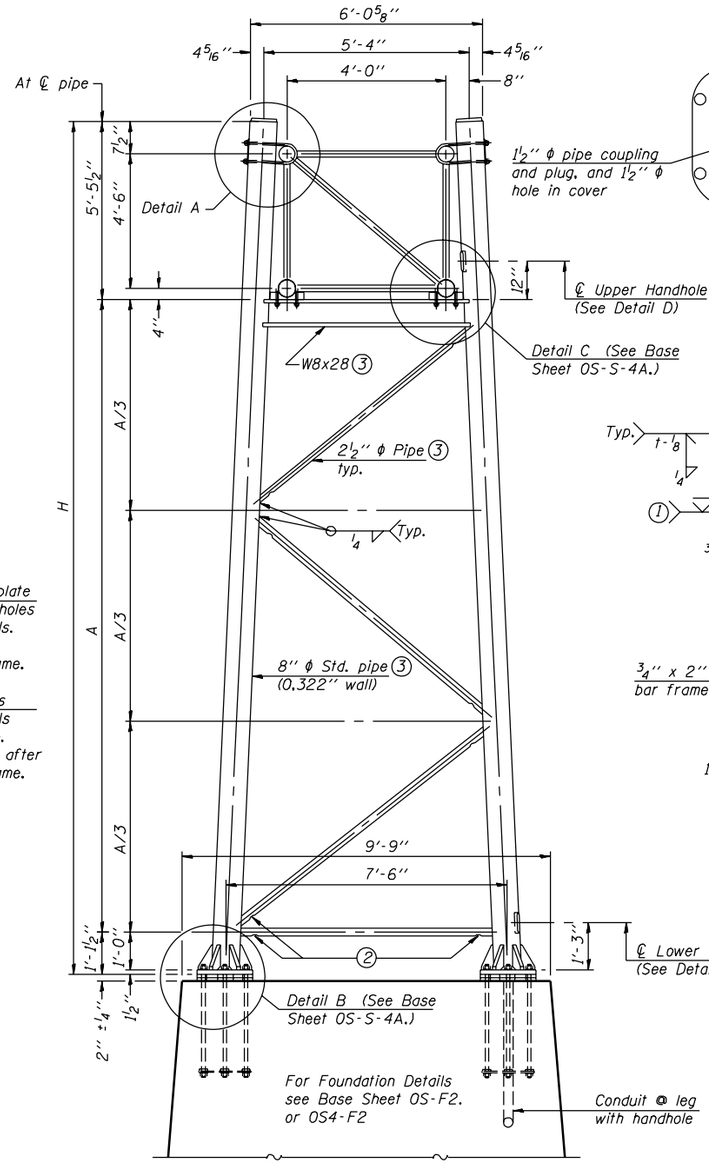


SECTION A-A

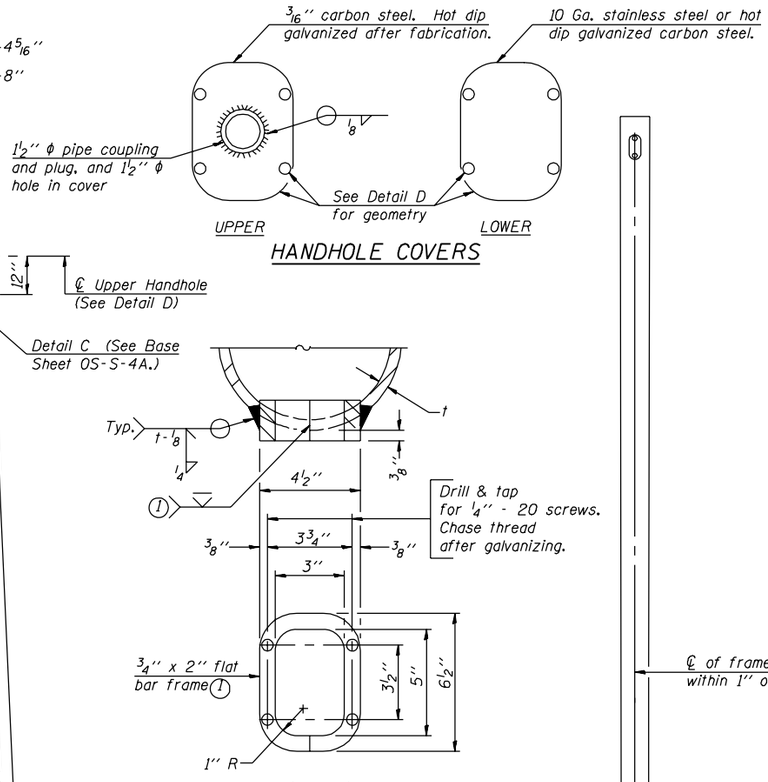
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



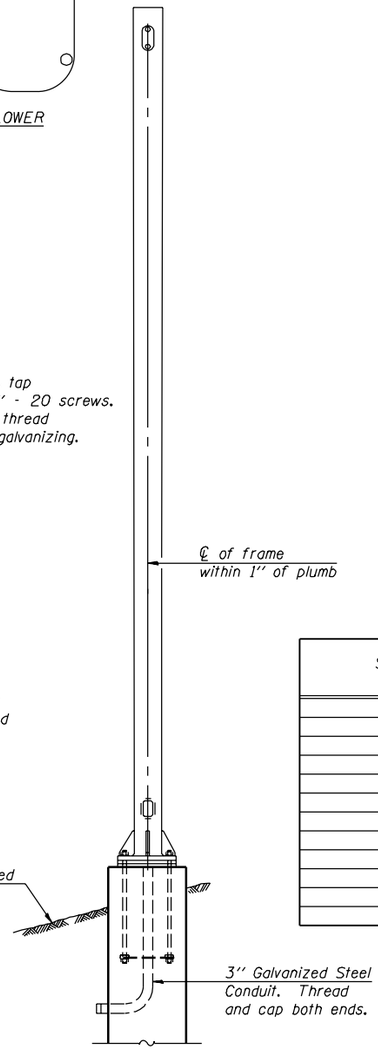
SIDE ELEVATION



HANDHOLE COVERS

Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip gavanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

Support Design Loads:
See Base Sheet OS-S-1 for design and loading criteria.

Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 µin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-S-1.

(4) See General Notes for fasteners.

(5) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(6) "H" based on 15'-0'' or actual sign height, whichever is greater.

Structure Number	Station	Support		H	A
		Left	Right	(6)	

8'' ϕ PIPE TRUSS SUPPORT FRAME

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE I-S STEEL TRUSS

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

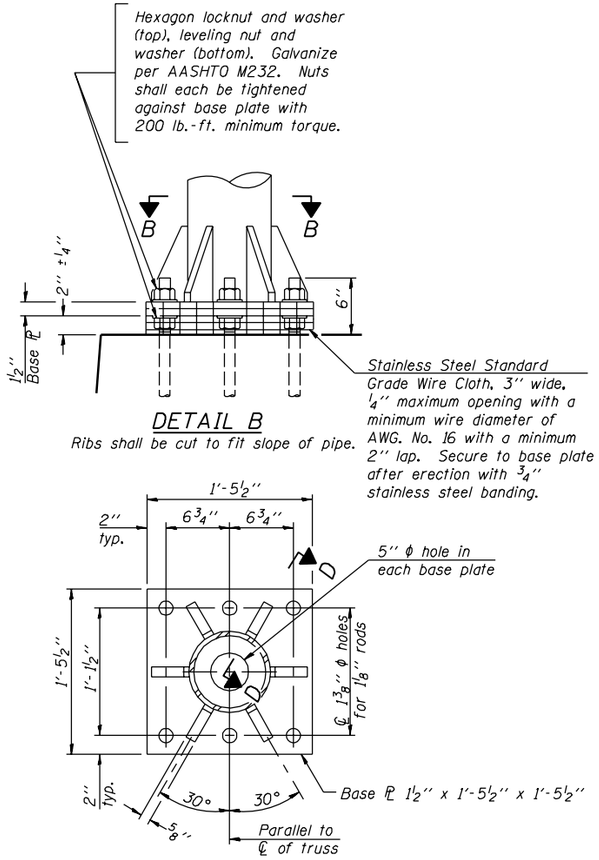
OS-S-4 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

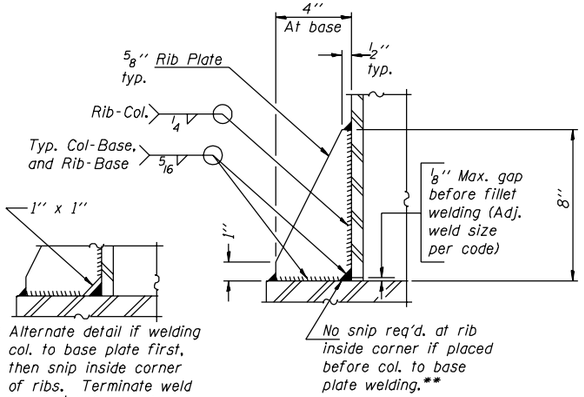
SHEET NO. -
- SHEETS

Contract #

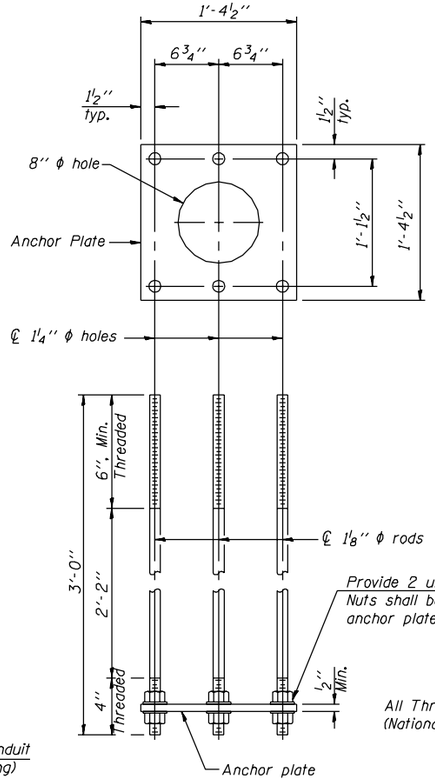


DETAIL B

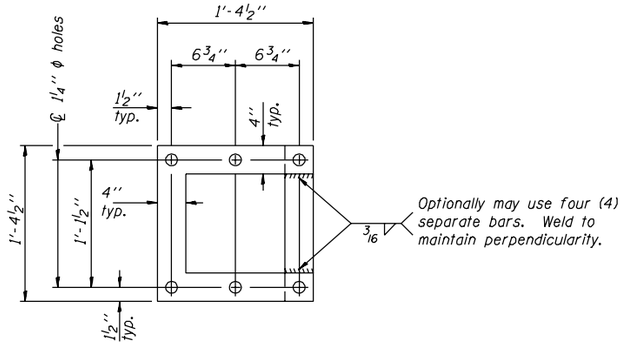
Ribs shall be cut to fit slope of pipe.



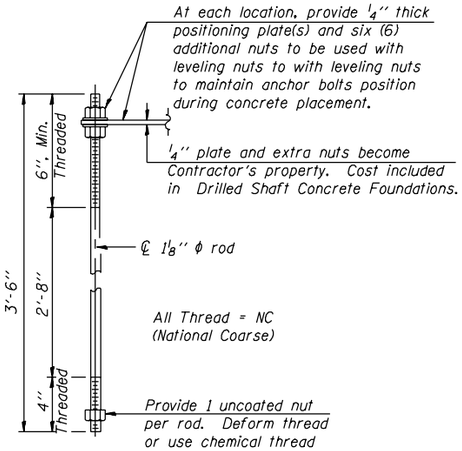
SECTION D-D



ANCHOR ROD DETAIL
Spread Footing Foundation

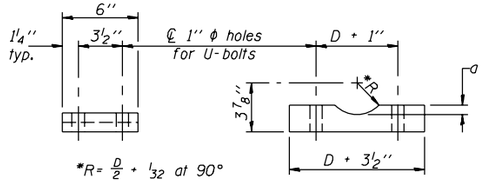


POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Drilled Shaft Foundation

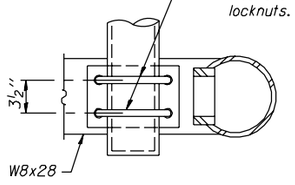
SECTION B-B



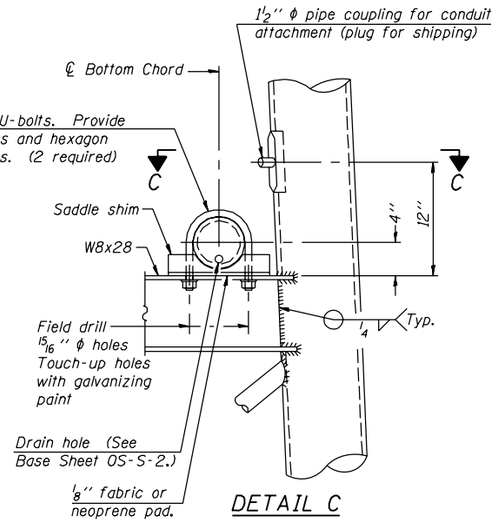
*R = D/2 + 1/32 at 90°
D = Outside Diameter of Chord.

SADDLE SHIM DETAIL

Truss Chord Nominal Dia.	a
5''	3/4''
5 1/2''	13/16''
6''	7/8''
6 1/2''	15/16''



SECTION C-C
(Handhole cover not shown)



DETAIL C

Anchor rods shall conform to AASHTO M314 Grade 36, 55 or 105 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.

TYPE I-S TRUSS
8'' ϕ PIPE SUPPORT FRAME DETAILS

NUMBER	REVISION	DATE

DESIGNED -	- 200
CHECKED -	EXAMINED
DRAWN -	ENGINEER OF BRIDGE DESIGN
CHECKED -	PASSED
	ENGINEER OF BRIDGES AND STRUCTURES

OS-S-4A 7/01/2006

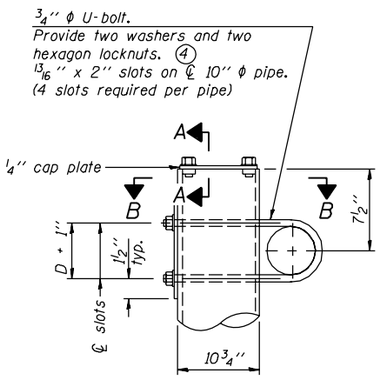
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR I-S STEEL TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

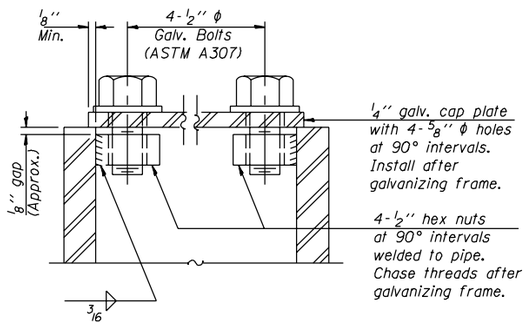
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. - - SHEETS

Contract #

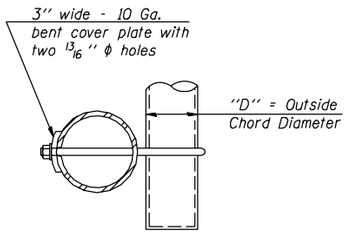


DETAIL A

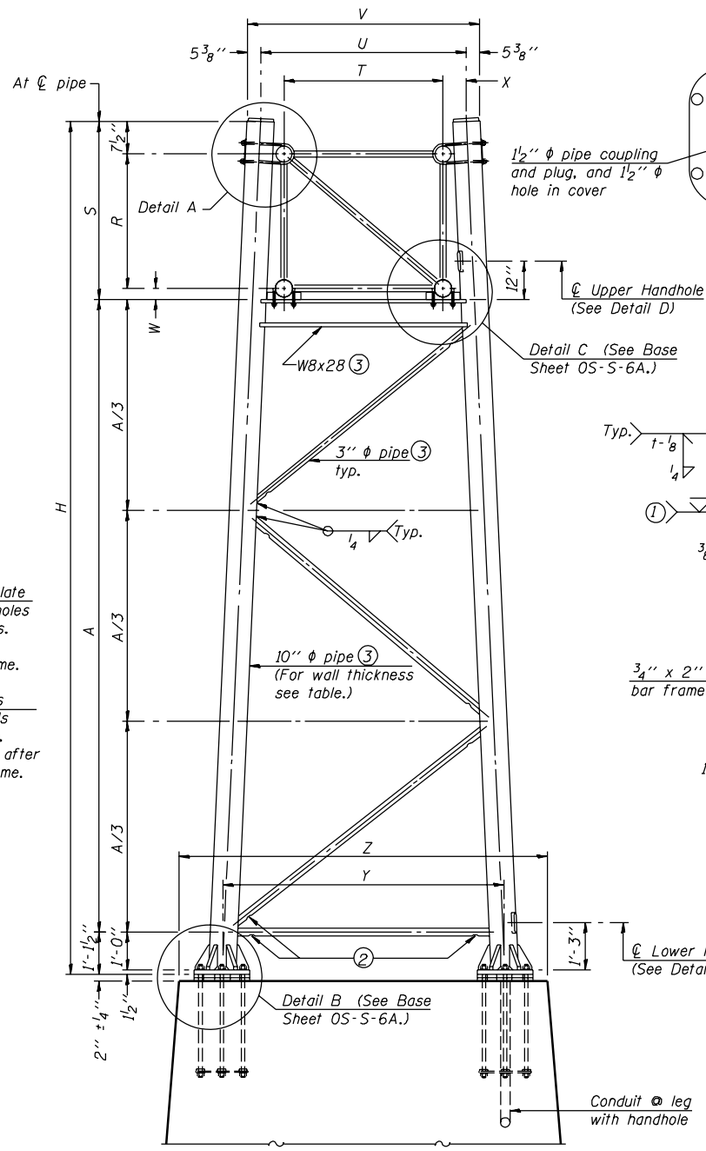


SECTION A-A

As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.

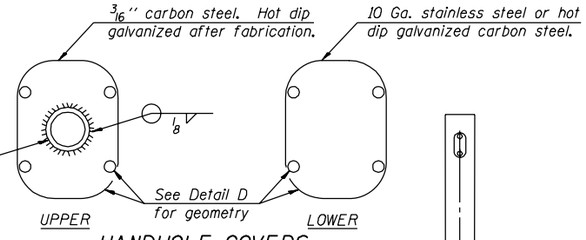


SECTION B-B

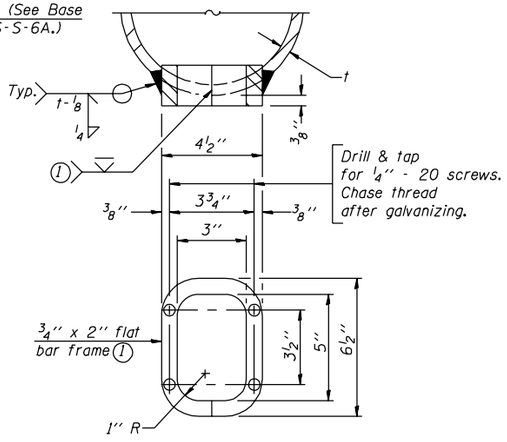


FOR FOUNDATION DETAILS SEE BASE SHEET OS-F3 (Spread Footing) or OS4-F3 (Drilled Shaft).

SIDE ELEVATION

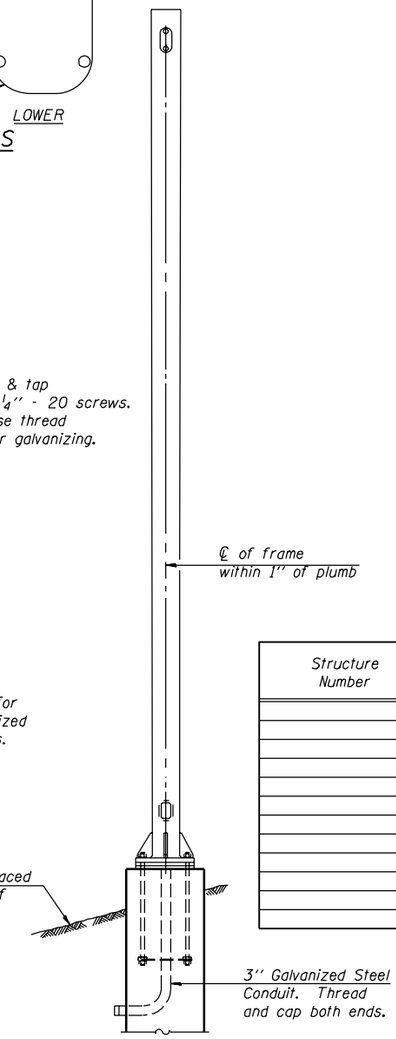


HANDHOLE COVERS



Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip gavanized or stainless steel machine screws.
(See cover details)

DETAIL D



END ELEVATION

Support Design Loads:
See Base Sheet OS-S-1 for design and loading criteria.

Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-S-1.

(4) See General Notes for fasteners.

(5) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(6) "H" based on 15'-0'' or actual sign height, whichever is greater.

Structure Number	Station	Support		Truss Type	Pipe Wall Thickness	H (6)	A
		Left	Right				

10'' ϕ PIPE TRUSS SUPPORT FRAME

Truss Type	Dimensions								
	R	S	T	U	V	W	X	Y	Z
I-S	4'-6''	5'-5 1/2''	4'-0''	5'-6''	6'-4 3/4''	4''	9''	8'-3''	10'-9''
II-S (5)	5'-3''	6'-3 1/4''	4'-6''	6'-1''	6'-11 3/4''	4 3/4''	9 1/2''	8'-3''	10'-9''

NUMBER	REVISION	DATE

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR STEEL TRUSS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

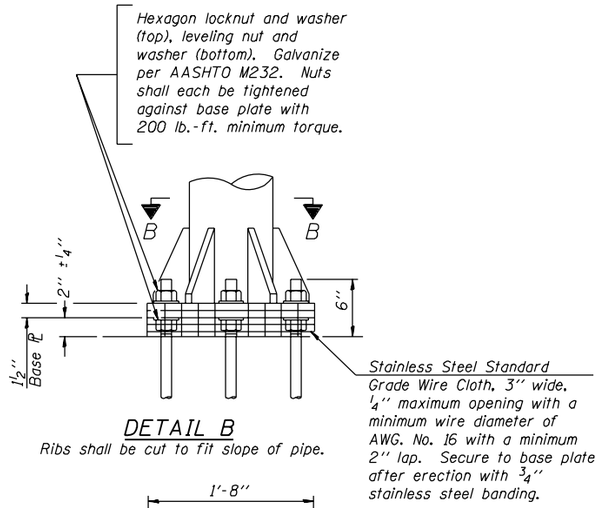
OS-S-6 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

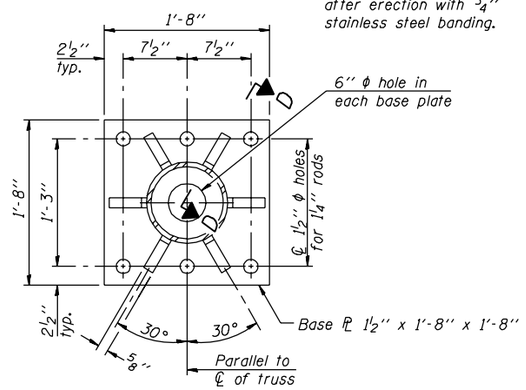
SHEET NO. - - SHEETS

Contract #

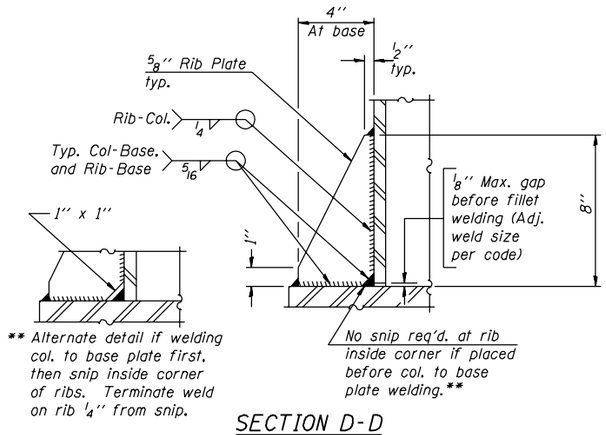


DETAIL B

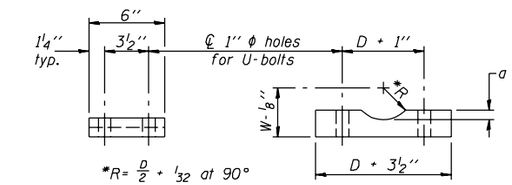
Ribs shall be cut to fit slope of pipe.



SECTION B-B



SECTION D-D

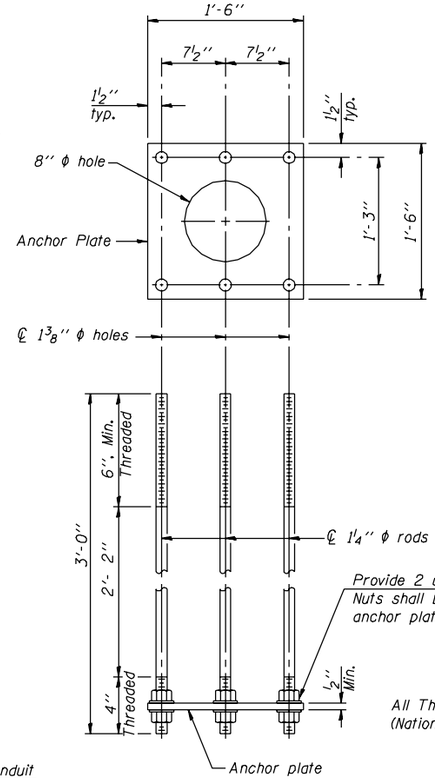


*R = D/2 + 1/32 at 90°

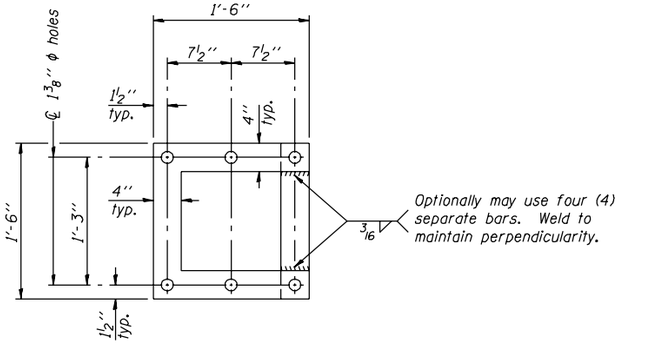
D = Outside Diameter of Chord.
For W. see Base Sheet OS-S-6.

SADDLE SHIM DETAIL

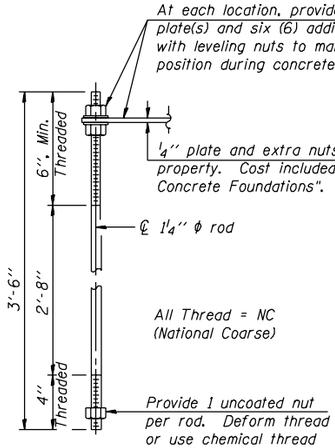
Truss Chord Nominal Dia.	a
5''	3/4''
5 1/2''	13/16''
6''	7/8''
6 1/2''	15/16''
7''	1''



ANCHOR ROD DETAIL
Spread Footing Foundation

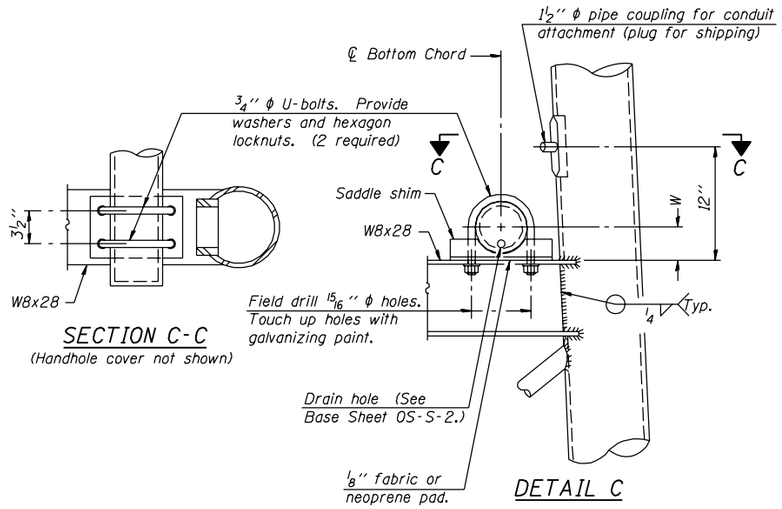


POSITIONING PLATE(S)



ANCHOR ROD DETAIL
Drilled Shaft Foundation

Anchor rods shall conform to AASHTO M314 Grade 36. 55 or 105 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



SECTION C-C
(Handhole cover not shown)

DETAIL C

10'' ϕ PIPE SUPPORT FRAME DETAILS

NUMBER	REVISION	DATE

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS-S-6A 7/01/2006

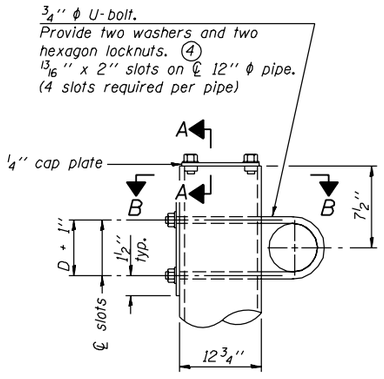
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME DETAILS STEEL TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

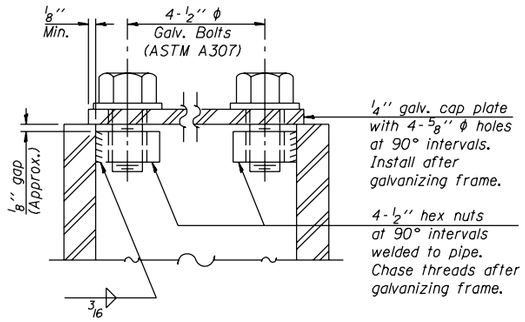
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. - - SHEETS

Contract #

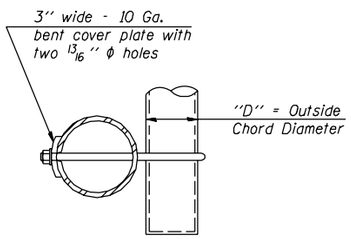


DETAIL A

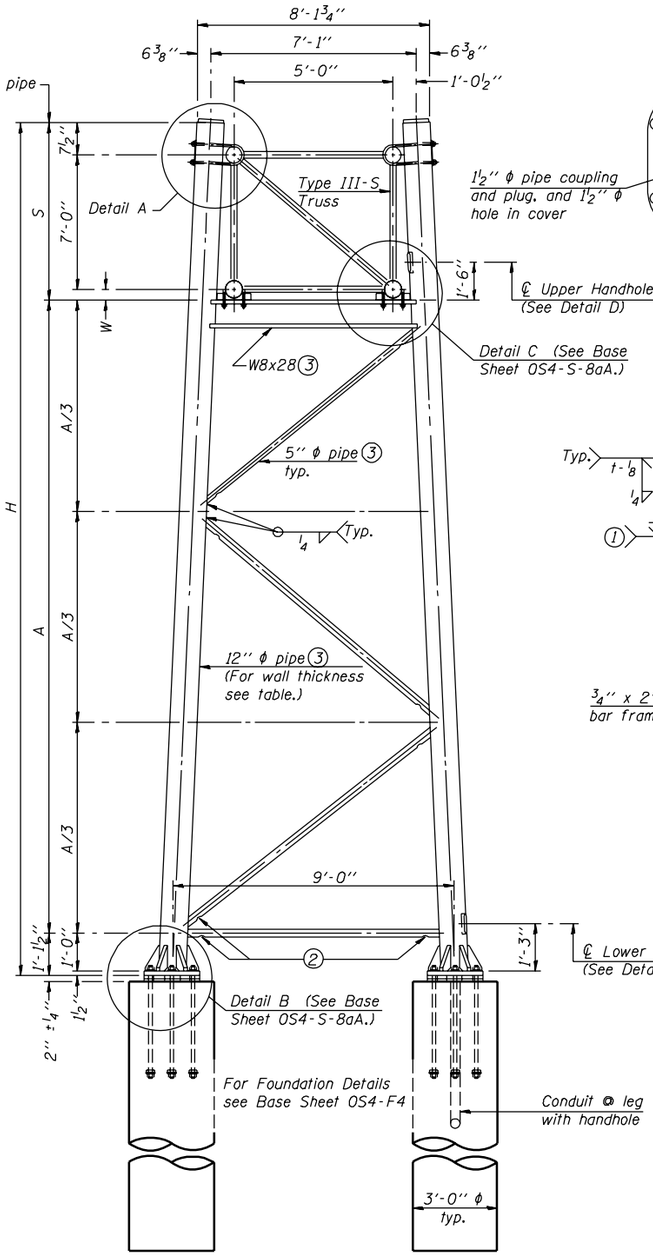


SECTION A-A

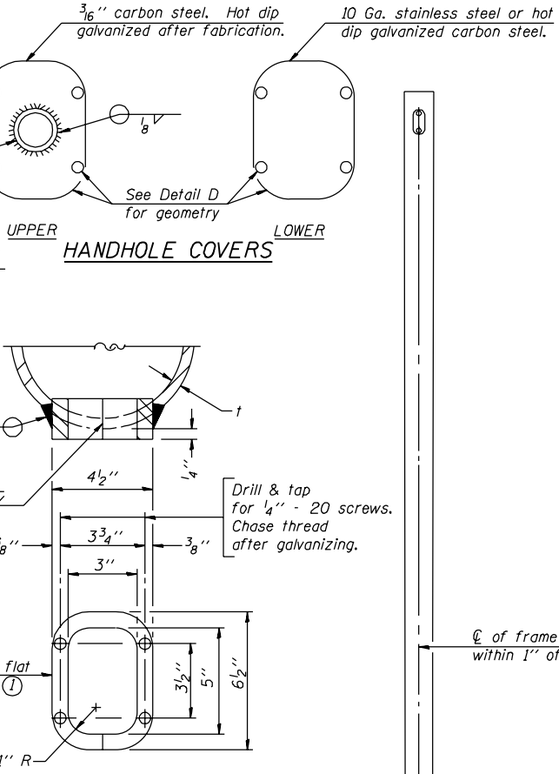
As an alternate to bolts, may use galvanized drive-fit caps installed after galvanizing frame.



SECTION B-B



SIDE ELEVATION



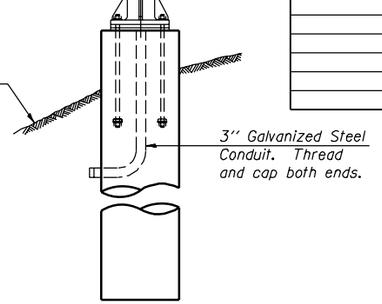
HANDHOLE COVERS

Provide 6 1/2'' x 4 1/2'' cover.
Provide 4-5/16'' ϕ holes in cover for 1/4''-20 round head hot dip gavanized or stainless steel machine screws.
(See cover details)

DETAIL D

Dimensions		
Truss Chord Nominal Dia.	W	S
6''	4 3/4''	8'-0 1/4''
8''	5 1/2''	8'-1''

TRUSS SUPPORT DETAILS
12'' ϕ PIPE-TYPE III-S TRUSS



END ELEVATION

Support Design Loads:
See Base Sheet OS-S-1 for design and loading criteria.

Load combinations checked include deadload plus:
a) 100% wind normal to sign, 20% parallel to sign
b) 60% wind normal to sign, 30% parallel to sign

(1) In lieu of fabricated handhole frame as shown, may cut from 2'' plate (rolling direction vertical). All cut faces to be ground to ANSI Roughness of 500 μin or less.

(2) Galvanizing vent holes of adequate size shall be provided on underside at each end of bracing pipes. Alternately, holes may be provided in wall of pipe column. All vent holes shall be drilled and de-burred, typ.

(3) See General Notes for fasteners.

(4) Dimensions shown are based on selection criteria in the Sign Structures Manual. Nonstandard applications must have dimensions verified or amended as appropriate.

(5) "H" based on 15'-0'' or actual sign height, whichever is greater.

(6) Steel pipe, plate, carbon steel handhole covers and rolled sections shall be hot dip galvanized after fabrication. Painting is not permitted. See Base Sheet OS-S-1.

* For dynamic message sign installations, provide upper and lower handholes in both legs of each support frame.

Structure Number	Station	Support		Pipe Wall Thickness	H (6)	A
		Left	Right			

NUMBER	REVISION	DATE

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

OS4-S-8a 7/01/2006

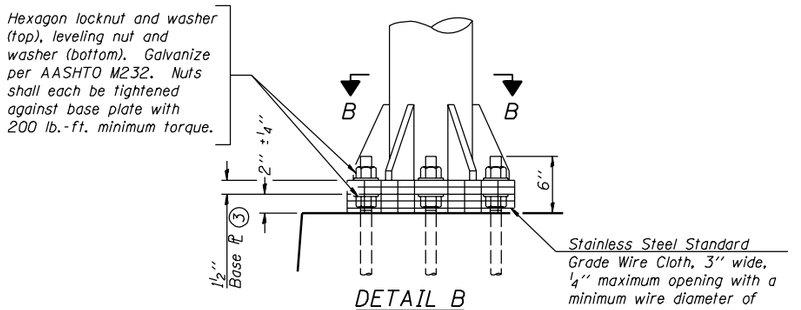
OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE III-S STEEL TRUSS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

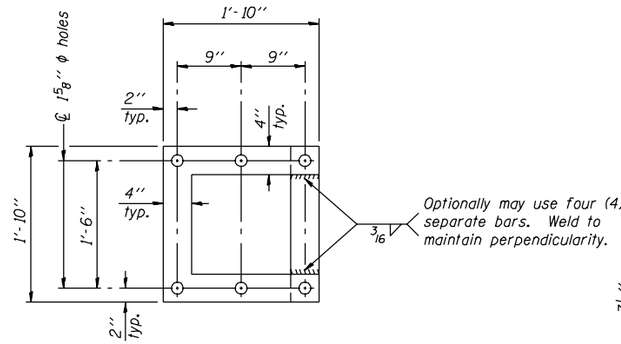
SHEET NO. -
- SHEETS

Contract #

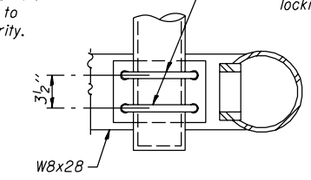


DETAIL B

Ribs shall be cut to fit slope of pipe.

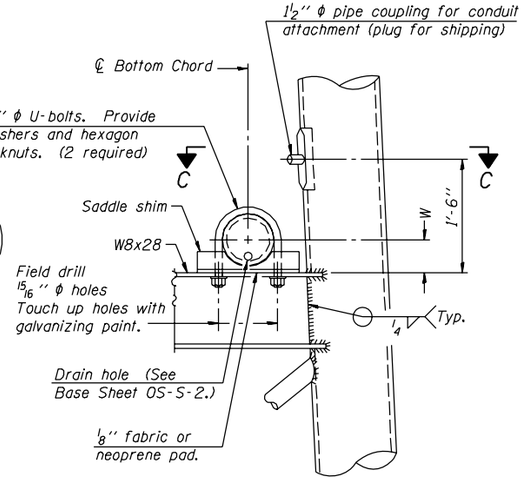


POSITIONING PLATE(S)

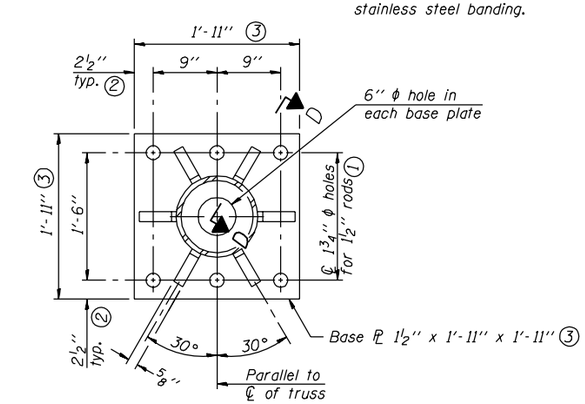


SECTION C-C

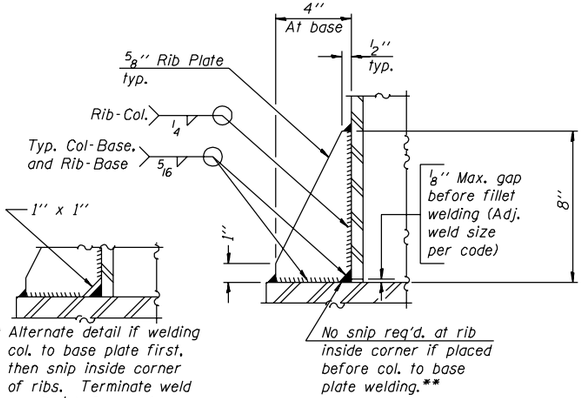
(Handhole cover not shown)



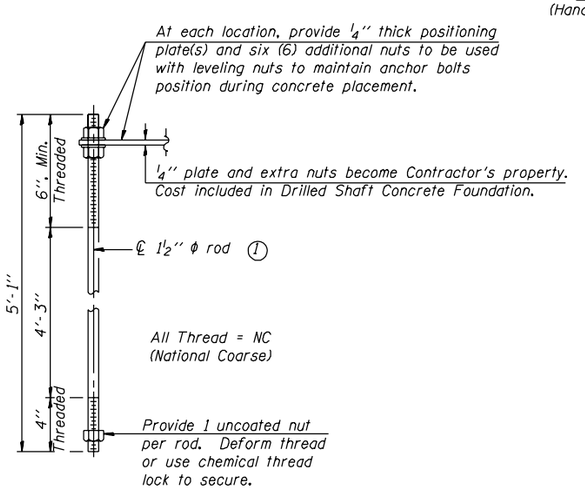
DETAIL C



SECTION B-B

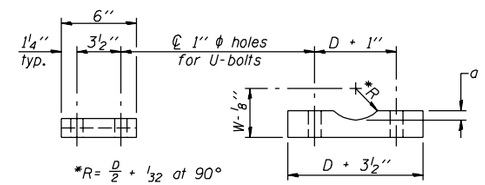


SECTION D-D



ANCHOR ROD DETAIL

Anchor rods shall conform to AASHTO M314 Grade 36, 55 or 105 and meet Charpy V-Notch (CVN) energy of 15 lb.-ft. at 40° F. Galvanize upper 12'' per AASHTO M232. No welding shall be permitted on rods.



D = Outside Diameter of Chord.
For W, see Base Sheet OS-S-6.

Truss Chord Nominal Dia.	a
7''	1''
8 1/2''	1 1/4''
9''	1 3/8''

SADDLE SHIM DETAIL

TYPE III-S STEEL TRUSS
12'' ϕ PIPE SUPPORT FRAME DETAILS

Notes:
For Type III-S Truss spans greater than 150 ft, and up to 160 ft.:

① 1 3/4'' ϕ rod, 2'' ϕ holes

② 2 3/4'' edge distance

③ Base ℄ 1 5/8'' x 1'-11 1/2'' x 1'-11 1/2''

OVERHEAD SIGN STRUCTURES
SUPPORT FRAME FOR
TYPE III-S STEEL TRUSS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

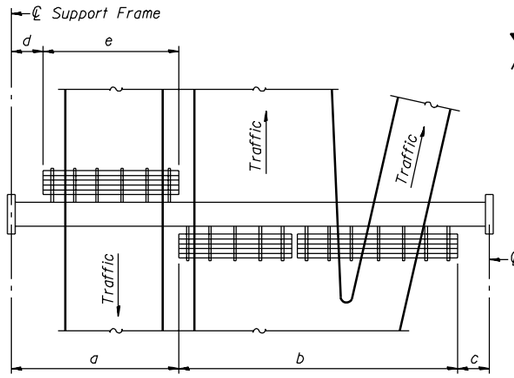
OS4-S-8aA 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

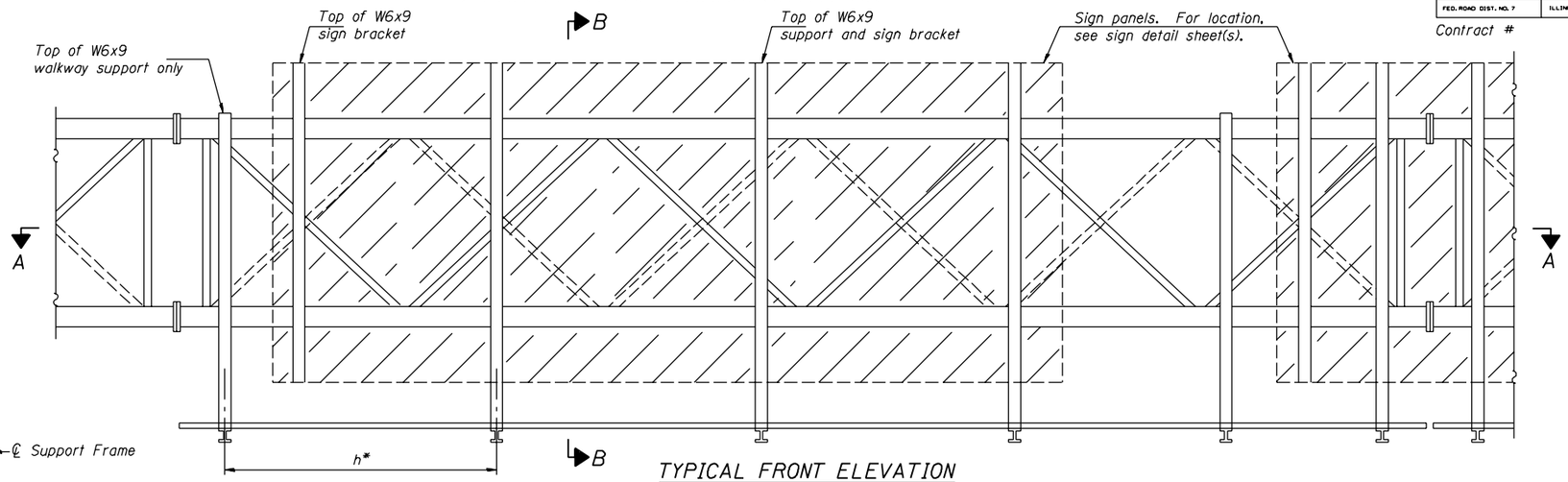
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

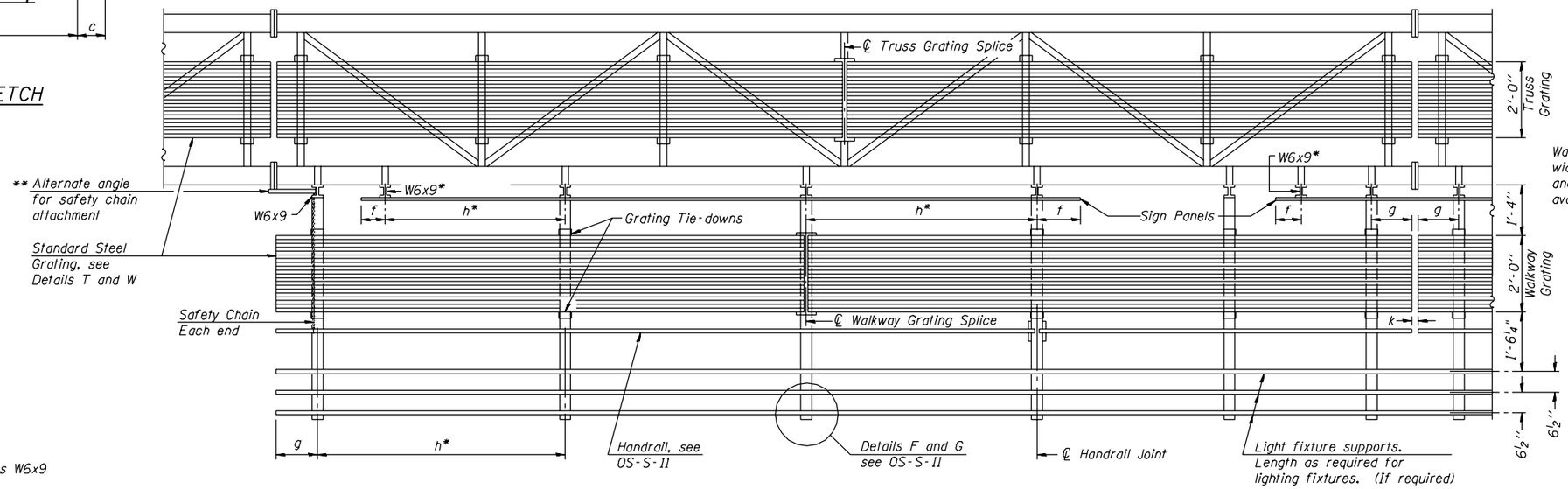
Contract #



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.



Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

BRACKET TABLE

W6x9		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:
* Space W6x9 walkway brackets and sign brackets W6x9 for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, W6x9)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-S-11

For Details T and W, Section B-B and Grating Splice Details, see Base Sheet OS-S-10.
For Handrail Details, see Base Sheet OS-S-11.

SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Handrail joints, grating, and light support splices placed as needed.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths

OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-S-9 7/01/2006

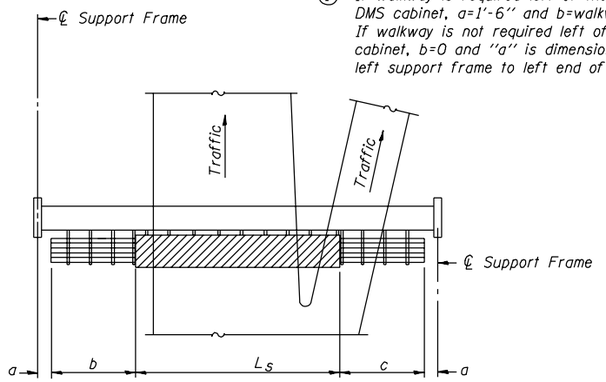
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

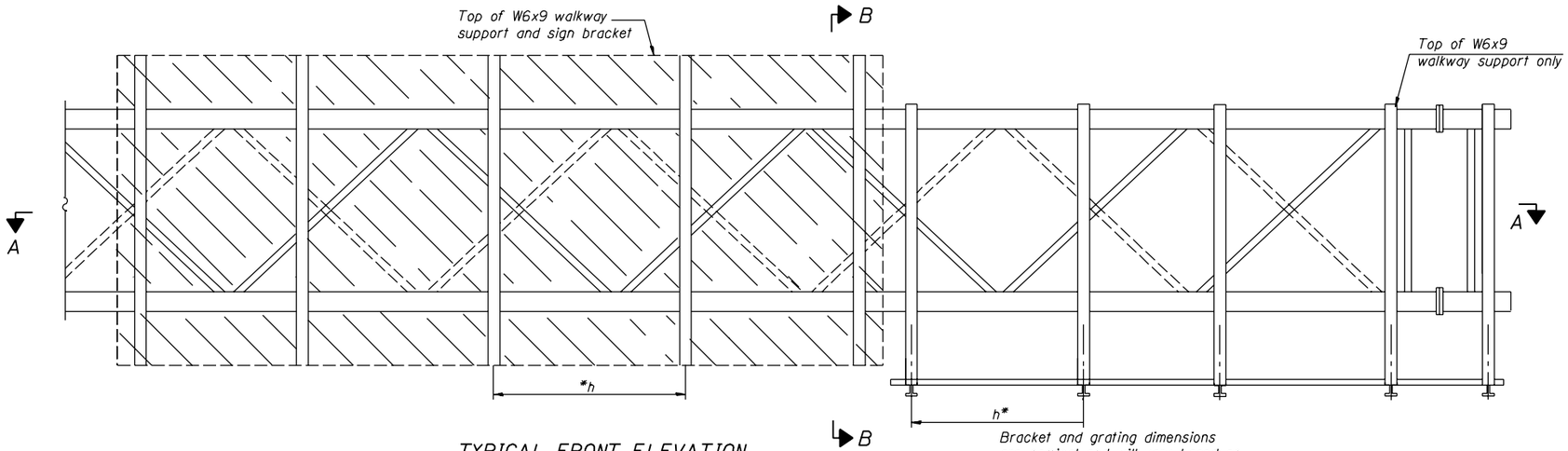
SHEET NO. -
- SHEETS

Contract #

① *If walkway is required left of the DMS cabinet, a=1'-6'' and b=walkway lengths. If walkway is not required left of the DMS cabinet, b=0 and "a" is dimension from left support frame to left end of cabinet.*



PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



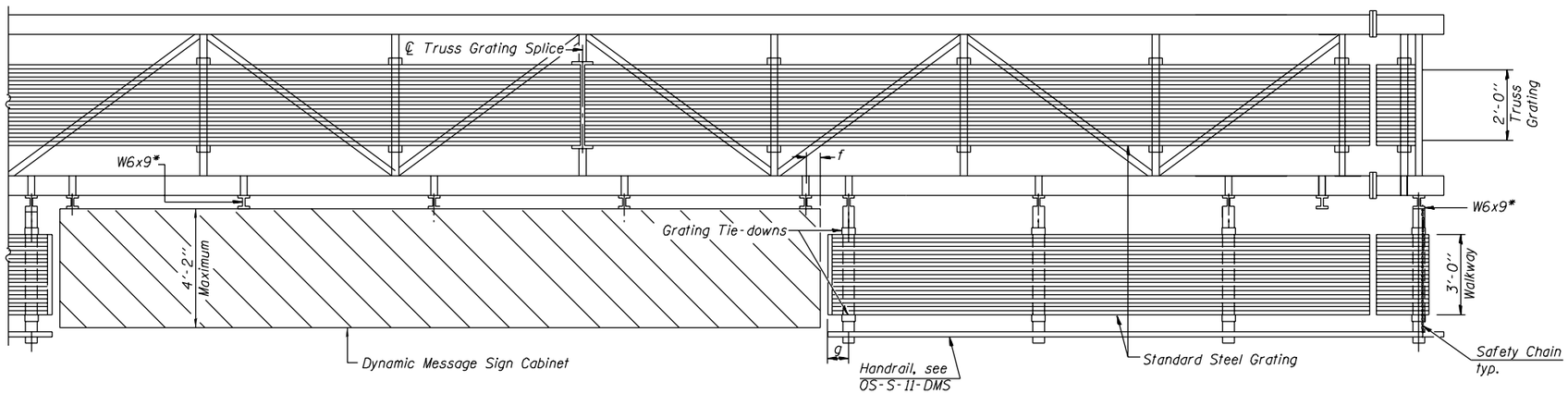
TYPICAL FRONT ELEVATION
With handrail omitted for clarity.

Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.

BRACKET TABLE

W6x9		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0''	2
8'-0''	14'-0''	3
14'-0''	20'-0''	4
20'-0''	26'-0''	5
26'-0''	32'-0''	6

Walkway and Truss Grating width dimensions are nominal and may vary ± 1/2'' based on available standard widths.



Notes:

* *Space W6x9 walkway brackets and sign brackets for efficiency and within limits shown:*

f = 12'' maximum, 4'' minimum (End of sign to ℄ of nearest bracket)
g = 12'' maximum, 4'' minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0'' maximum (℄ to ℄ sign and/or walkway support brackets. W6x9)

** *Maximum DMS weight = 5000 lbs. 4'-2'' maximum cabinet depth includes depth of cabinet plus connection to WF6x5.40.*

For Section B-B and Grating Splice Details, see Base Sheet OS-S-10-DMS.
For Handrail Splice Details, see Base Sheet OS-S-11-DMS.

SECTION A-A

Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints. Place all sign and walkway brackets as close to panel points as practical. Grating and handrail splices placed as needed.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12'' on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".

Structure Number	Station	a	b	c	L_s	Walkway Grating and Handrail Lengths

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

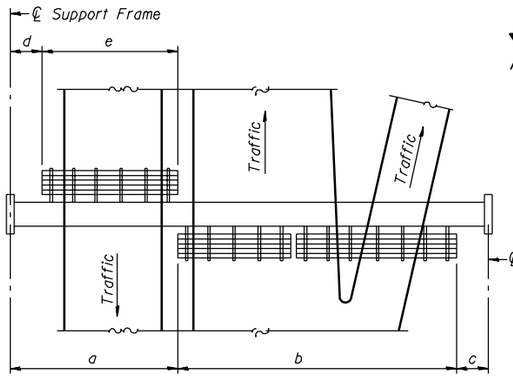
OVERHEAD SIGN STRUCTURES
ALTERNATE STEEL WALKWAY DETAILS FOR DMS

OS-S-9-DMS 7/01/2006

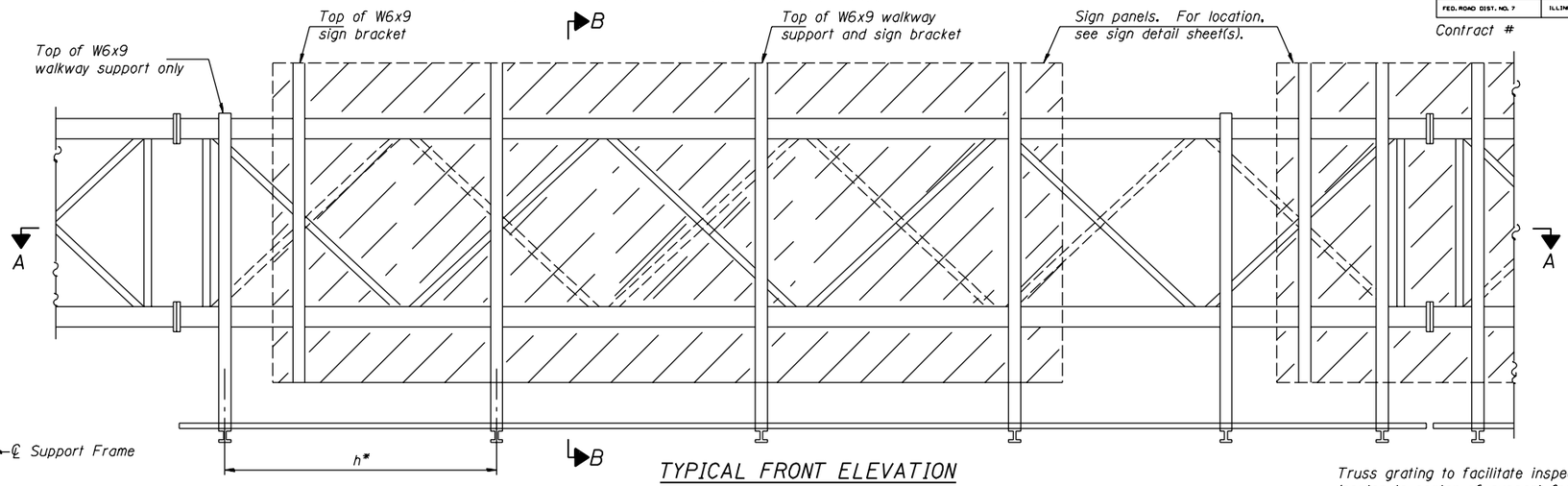
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS
Contract #

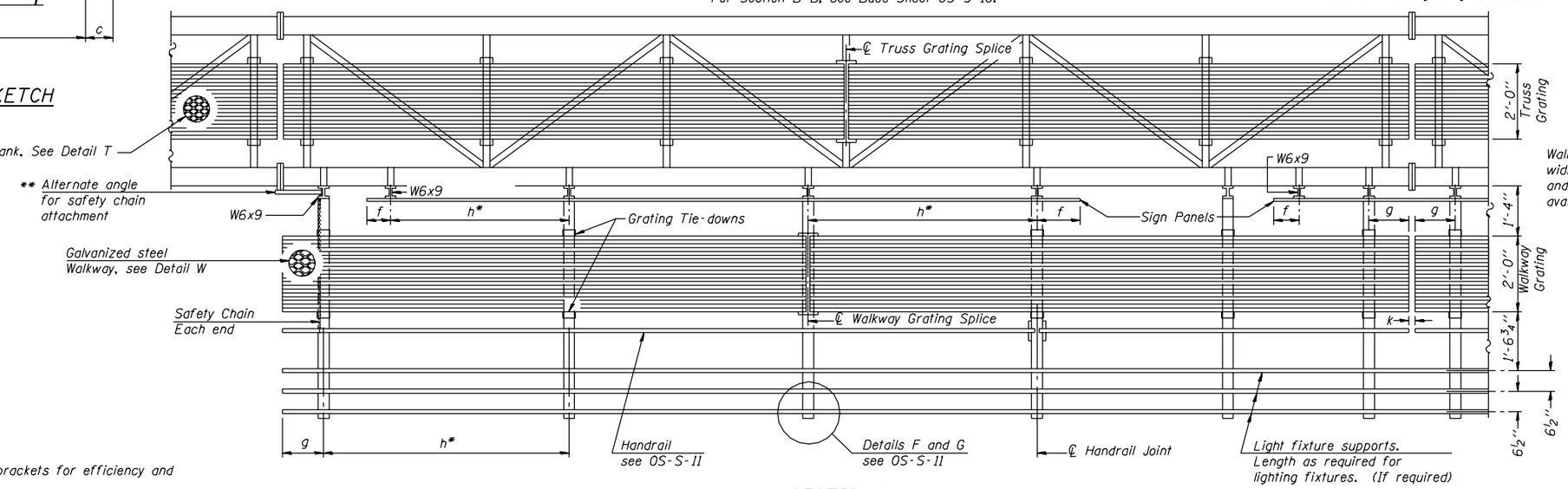


PLAN
WALKWAY AND HANDRAIL SKETCH
(Road plan beneath truss varies)



TYPICAL FRONT ELEVATION
With lights and handrail omitted for clarity.
For Section B-B, see Base Sheet OS-S-10.

Truss grating to facilitate inspection shall run full length (center to center of support frames) ±12" on overhead trusses. Cost of truss grating is included in "Overhead Sign Structure".



Walkway and Truss Grating width dimensions are nominal and may vary ±½" based on available standard widths.

BRACKET TABLE

W6x9		
Sign Width		Number Brackets Required
Greater Than	Less Than or Equal To	
	8'-0"	2
8'-0"	14'-0"	3
14'-0"	20'-0"	4
20'-0"	26'-0"	5
26'-0"	32'-0"	6

Notes:
* Space W6x9 walkway brackets and sign brackets for efficiency and within limits shown:

f = 12" maximum, 4" minimum (End of sign to ℄ of nearest bracket)
g = 12" maximum, 4" minimum (End of walkway grating to ℄ of nearest support bracket)
h = 6'-0" maximum (℄ to ℄ sign and/or walkway support brackets, W6x9)
k = 2" maximum gap between adjacent walkway grating sections and handrail ends

** If walkway bracket at safety chain location is behind sign, add angle to bracket, see Alternate Safety Chain Attachment on Base Sheet OS-S-11.

For Details T and W, Section B-B and Grating Splice Details, see Base Sheet OS-S-10.
For Handrail Details, see Base Sheet OS-S-11.

SECTION A-A
Handrail and walkway shall span a minimum of three brackets between splices and/or gap joints.
Place all sign and walkway brackets as close to panel points as practical.
Grating, handrail and light support splices placed as needed.

Note:
Details shown are considered equal alternatives to the Steel Walkway on Base Sheet OS-S-9, and may be substituted by Contractor at no change in contract cost.

Structure Number	Station	a	b	c	d	e	Walkway Grating and Handrail Lengths

OVERHEAD SIGN STRUCTURES
ALTERNATE STEEL WALKWAY DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

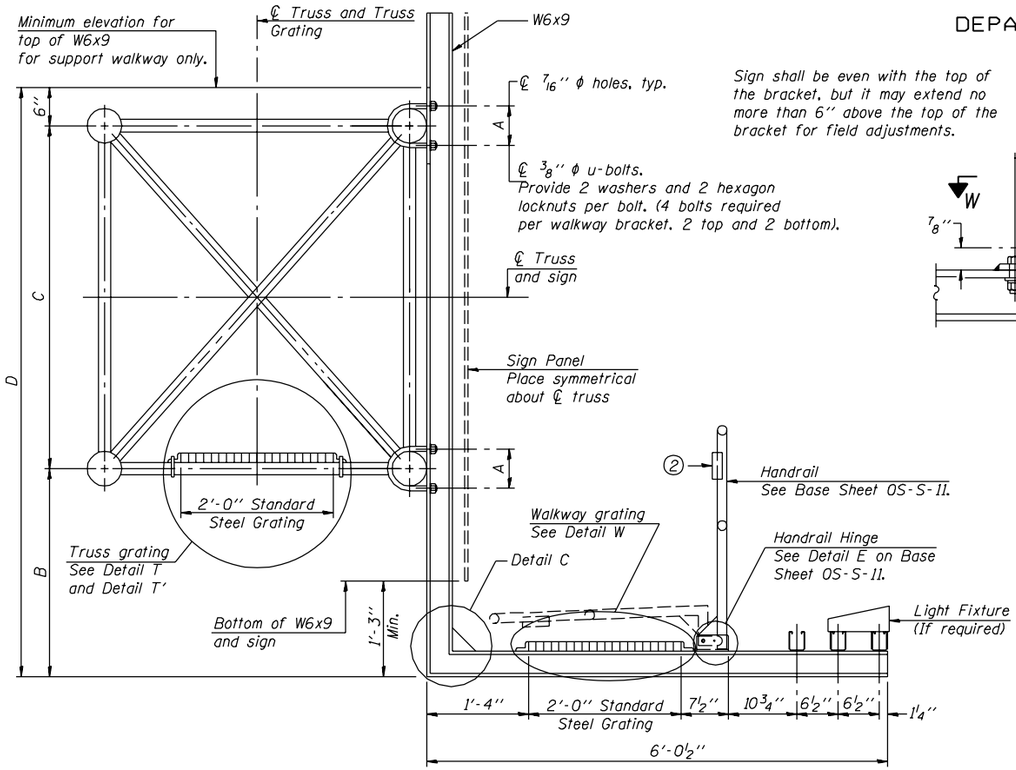
OS-S-9S 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

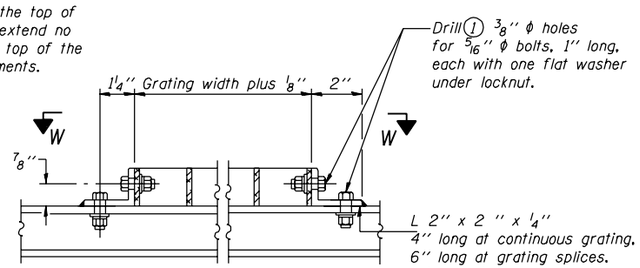
SHEET NO. -
- SHEETS

Contract #

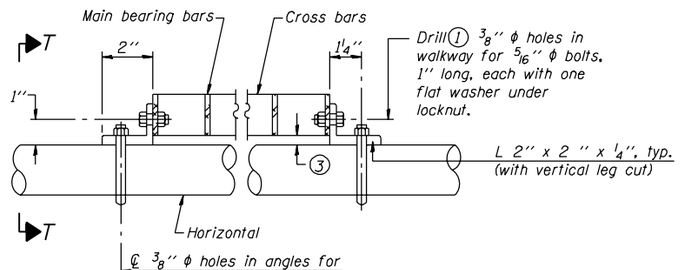


SECTION B-B

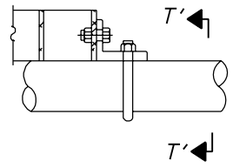
Sign shall be even with the top of the bracket, but it may extend no more than 6" above the top of the bracket for field adjustments.



DETAIL W
(Walkway grating)

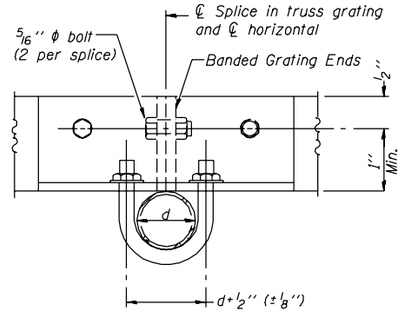


DETAIL T
(Continuous Truss grating)

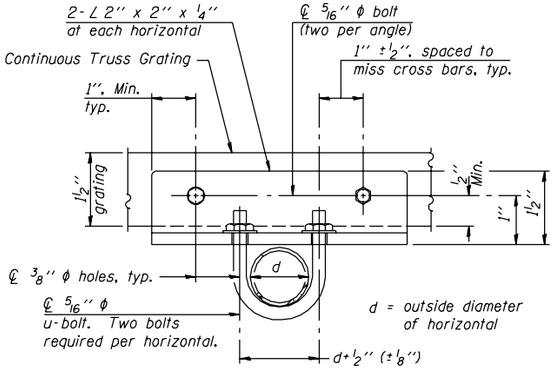


DETAIL T'

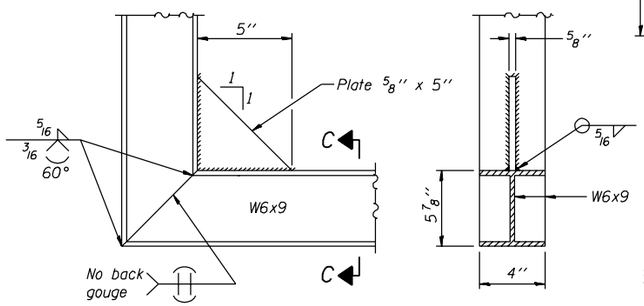
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



SECTION T'-T'

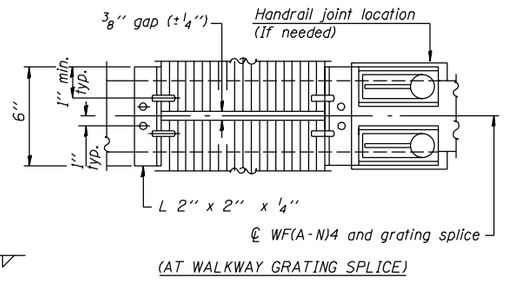


SECTION T-T

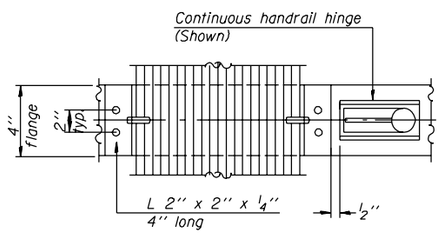


DETAIL C

SECTION C-C



(AT WALKWAY GRATING SPLICE)



(CONTINUOUS WALKWAY GRATING)

SECTION W-W

BARS SIZES FOR STANDARD STEEL GRATING

TRUSS GRATING	Main bearing bars 1/8" x 1 1/2" on 1 3/16" centers. Cross bars 3/16" x 1 1/2" on 4" centers.
WALKWAY GRATING	Main bearing bars 3/16" x 1 1/2" on 1 3/16" centers. Cross bars 3/16" x 1 1/2" on 4" centers.

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) ℄ 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(3) Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.

Structure Number	Station	A	B	C	D

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-S-10 7/01/2006

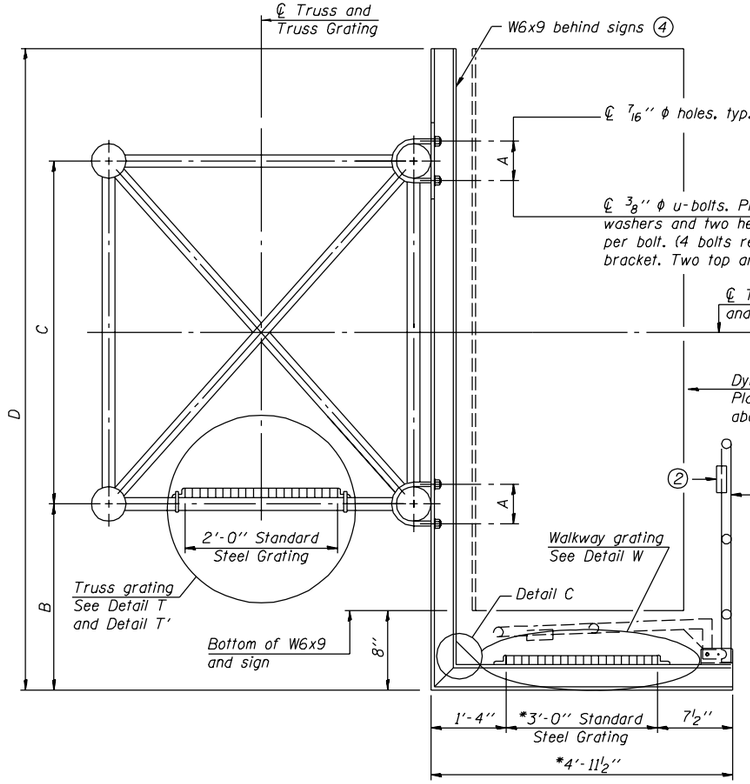
OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

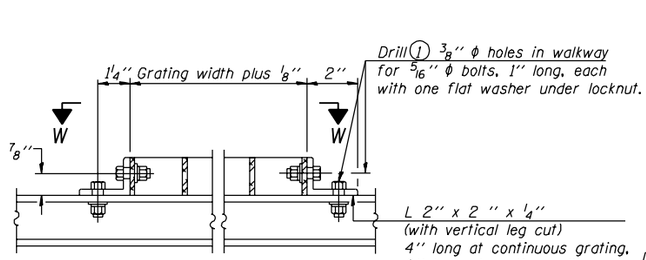
SHEET NO. -
- SHEETS

Contract #

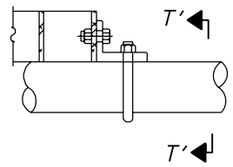


SECTION B-B

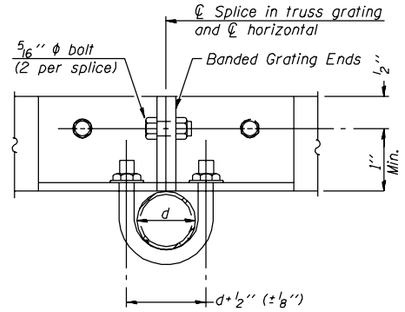
* Bracket and grating dimensions are nominal and will vary based on actual DMS cabinet dimensions plus manufacturer's mounting devices.



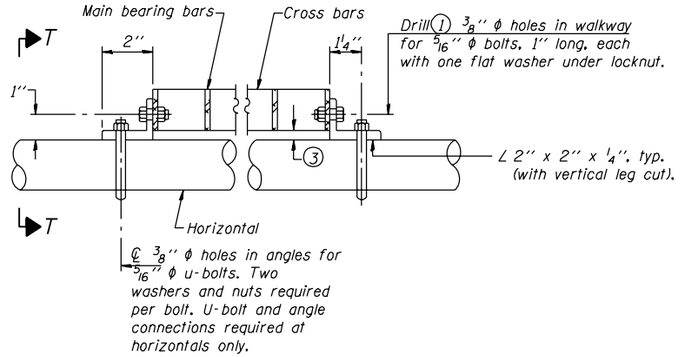
DETAIL W
(Walkway grating)



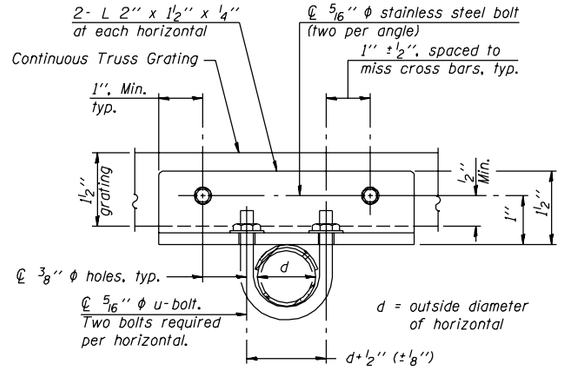
DETAIL T'
(Truss grating splice)
Details not shown same as Detail T.
Alternate materials may be used subject to the Engineer's review and approval.



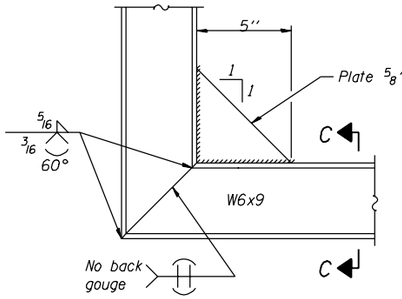
SECTION T'-T'



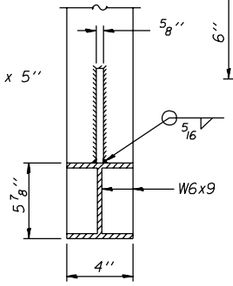
DETAIL T
(Continuous Truss grating)



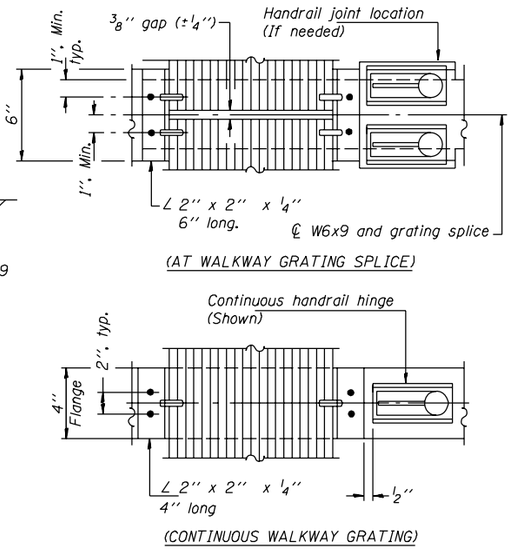
SECTION T-T



DETAIL C



SECTION C-C



SECTION W-W

BARS SIZES FOR STANDARD STEEL GRATING

TRUSS GRATING	Main bearing bars 3/16" x 1 1/2" on 1 3/16" centers. Cross bars 3/16" x 1 1/2" on 4" centers.
WALKWAY GRATING	Main bearing bars 3/16" x 1 1/2" on 1 3/16" centers. Cross bars 3/16" x 1 1/2" on 4" centers.

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

(3) Tube to grating gap may vary from 0 to 1/2", max. to align walkway, allow for camber, etc.

(4) Cabinet manufacturer must design and supply hardware for connection of cabinet to WF6's. Bolts must be stainless steel or hot dip galvanized high strength per IDOT specifications.

Structure Number	Station	A	B	C	D

OVERHEAD SIGN STRUCTURES
ALTERNATE STEEL WALKWAY DETAILS
FOR DMS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED
ENGINEER OF BRIDGE DESIGN

PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

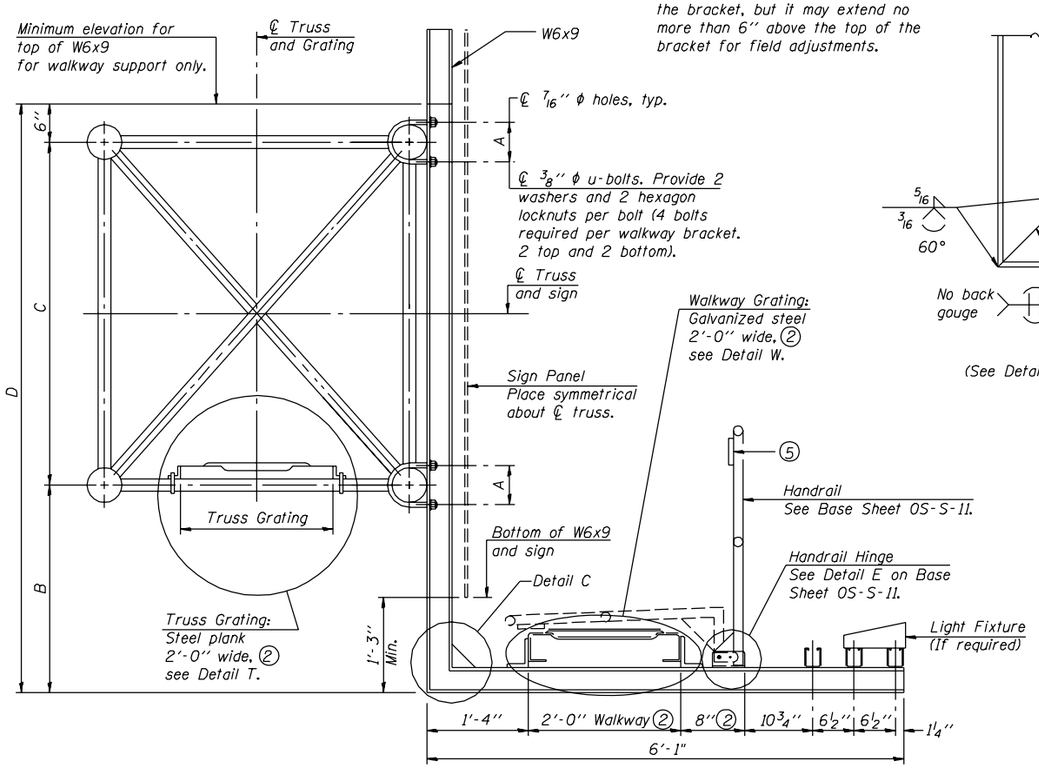
OS-S-10-DMS 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

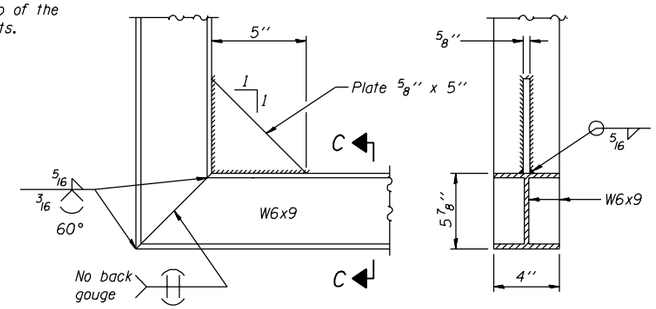
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. -
- SHEETS

Contract #

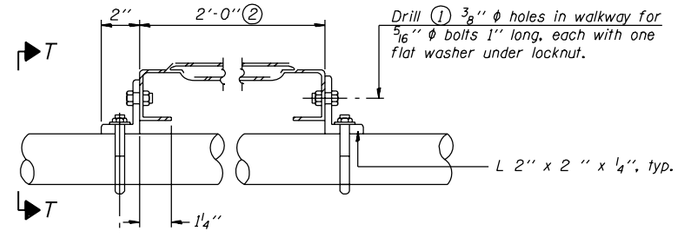


SECTION B-B

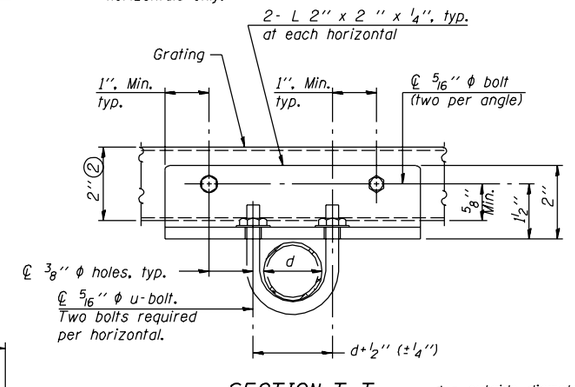


DETAIL C
(See Detail P, on Base Sheet OS-S-11.)

SECTION C-C

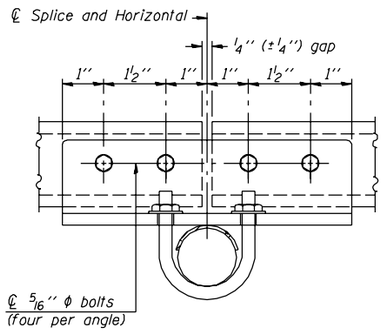


DETAIL T
(Truss grating at horizontal)



SECTION T-T
(Truss Grating Continuous)

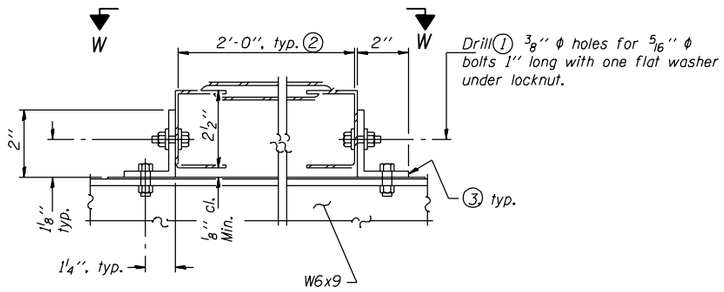
d = outside diameter of horizontal



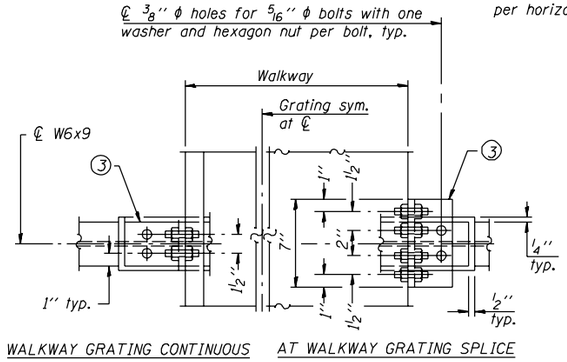
SECTION T-T
(Truss Grating Splice)
Alternate splice details and locations may be used subject to the Engineer's review and approval.

STEEL TRUSS GRATING

Structure Number	Station	A	B	C	D



DETAIL W
GALVANIZED STEEL WALKWAY GRATING



WALKWAY GRATING CONTINUOUS AT WALKWAY GRATING SPLICE

SECTION W-W

(1) Drilling holes in grating may be done in shop or field, based on Contractor's preference and subject to accurate alignment.

(2) Perforated or expanded metal grating providing a skid resistant (non-serrated) surface and capable of supporting a 500 pound concentrated load with a 6'-0" clear span. Walkway and truss grating dimensions are nominal and may vary (width ±1/2", depth ±1/2") based on available standard sizes. Cut ends of grating shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.

(3) Galvanized steel L 2" x 2" x 1/4", 3 1/2" long with continuous grating, 7" long at grating splice.

(4) Details shown are considered equal alternatives to the on Base Sheet OS-S-10 and may be substituted by Contractor at no change in contract cost.

(5) PL 1/8" x 1/2" x 2" welded to handrail posts to protect locations that contact grating.

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-S-10S 7/01/2006

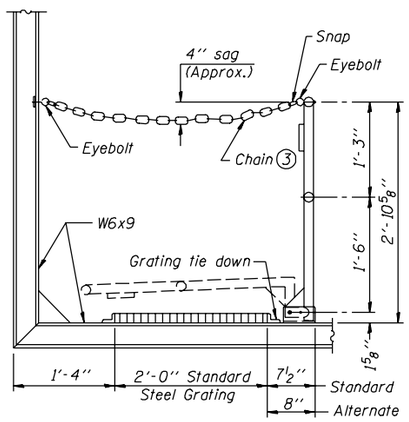
OVERHEAD SIGN STRUCTURES
ALTERNATE STEEL WALKWAY DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

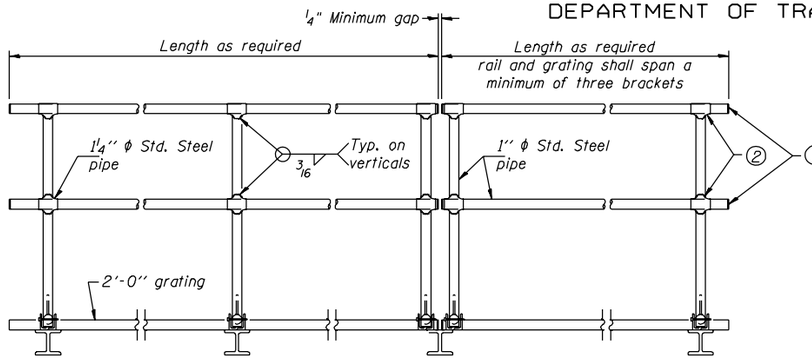
SHEET NO. -
- SHEETS

Contract #



SIDE ELEVATION
(Showing safety chain w/o sign)

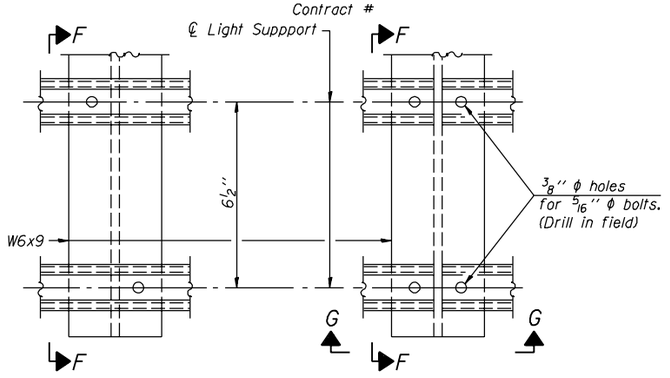
HANDRAIL DETAILS



FRONT ELEVATION

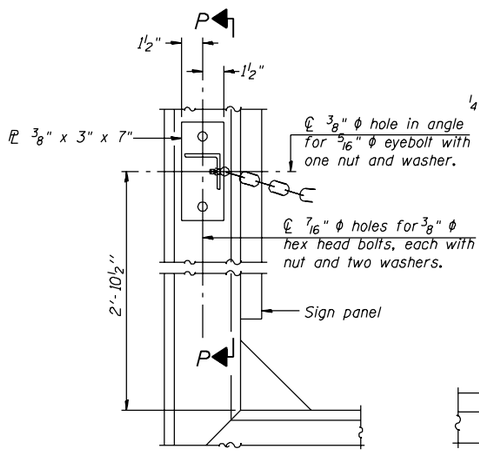
(1) Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

(2) Horizontal handrail member shall be continuous thru 1 1/4"ϕ pipe. Provide 7/16" ϕ hole in 1 1/4"ϕ pipe for 3/8" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" ϕ holes on top rail at ends only.)

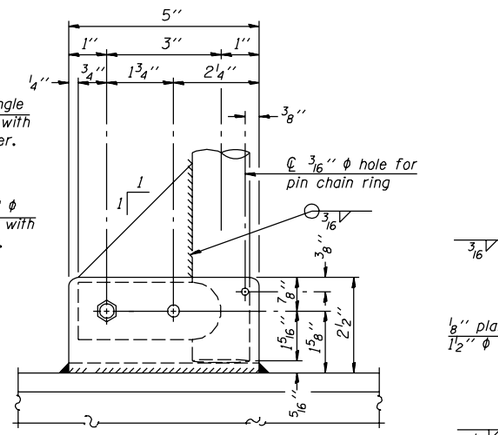


DETAIL F

DETAIL G

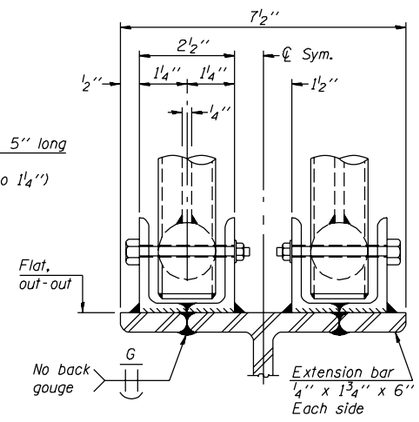


ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"

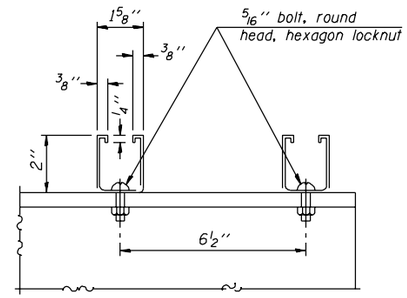


SIDE ELEVATION

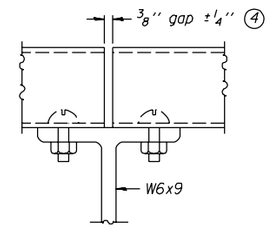
FRONT ELEVATION
See "ELEVATION" at right for dimensions.



ELEVATION AT HANDRAIL JOINT



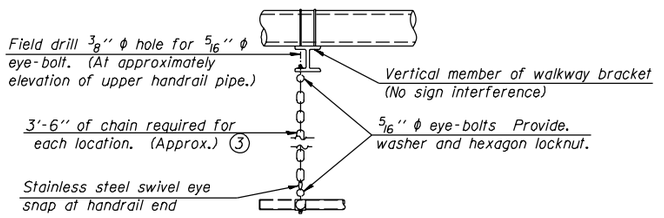
SECTION F-F



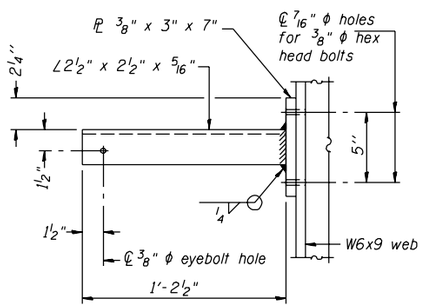
SECTION G-G

LIGHTING FIXTURE MOUNTS (IF REQUIRED)

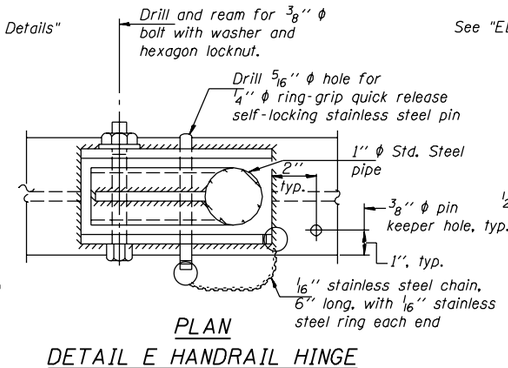
(4) Field cut ends of light support channels shall be free of burrs or hazardous projections and coated with zinc-rich primer or equivalent.



SAFETY CHAIN
One required for each end of each walkway.

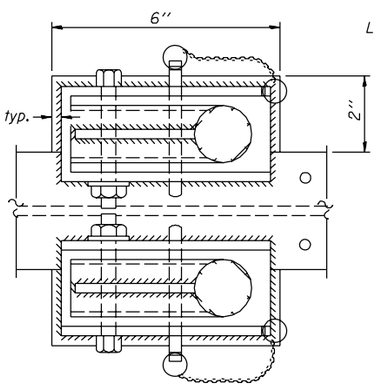


SECTION P-P

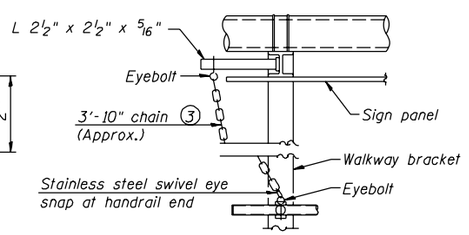


PLAN

DETAIL E HANDRAIL HINGE



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)

(3) 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

OVERHEAD SIGN STRUCTURES
STEEL HANDRAIL DETAILS

DESIGNED	-
CHECKED	-
DRAWN	-
CHECKED	-

- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

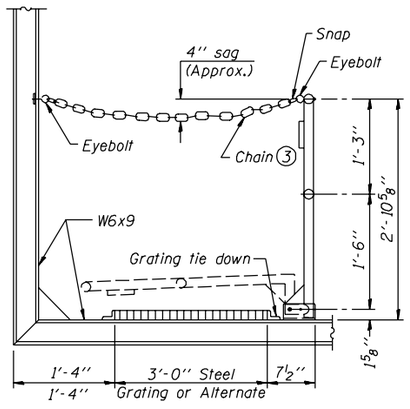
OS-S-11 7/01/2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	-		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

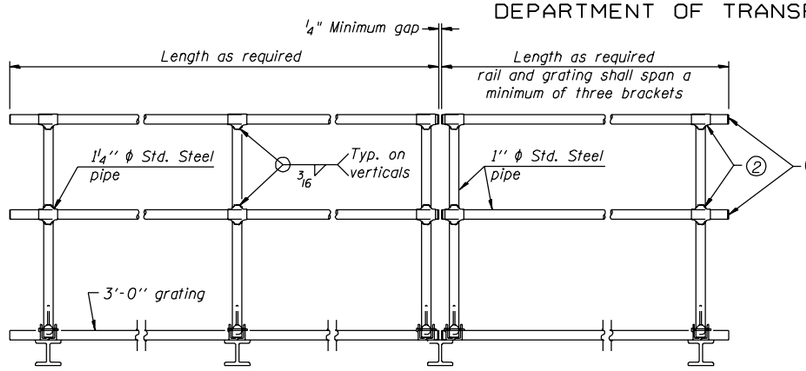
SHEET NO. -
- SHEETS

Contract #



SIDE ELEVATION
(Showing safety chain w/o sign)

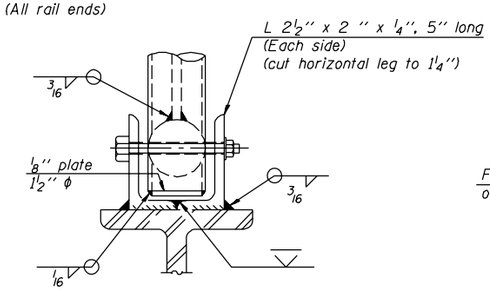
HANDRAIL DETAILS



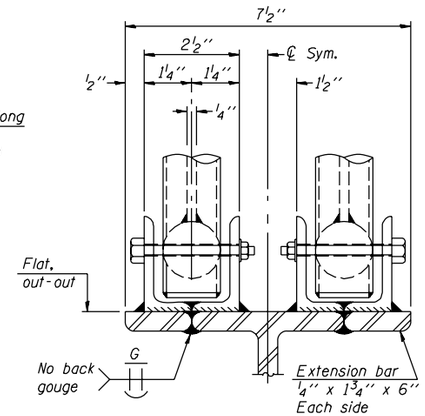
FRONT ELEVATION

(1) Install standard force-fit end caps or weld 1/8" end plates with 1/8" c.f.w. and grind smooth. (All rail ends)

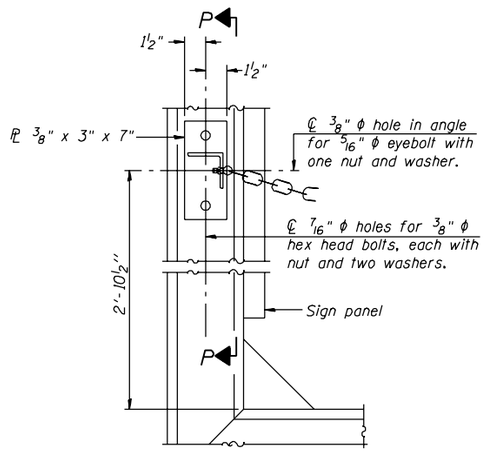
(2) Horizontal handrail member shall be continuous thru 1 1/4"ϕ pipe. Provide 7/16" ϕ hole in 1 1/4"ϕ pipe for 3/8" ϕ bolt. Field drill 7/16" ϕ hole in horizontal rail member. Provide washer and locknut for bolt. (Use 5/16" eyebolts in 7/16" ϕ holes on top rail at ends only.)



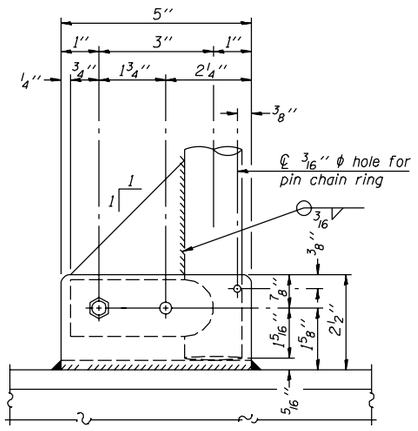
FRONT ELEVATION
See "ELEVATION" at right for dimensions.



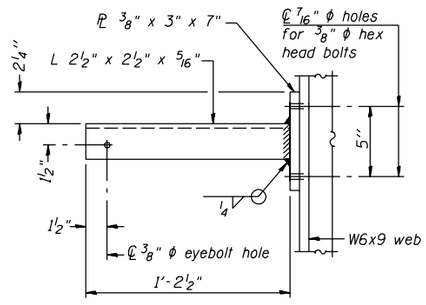
ELEVATION AT HANDRAIL JOINT



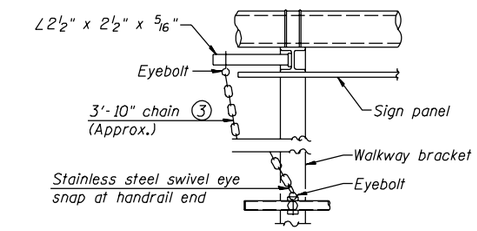
ALTERNATE SAFETY CHAIN ATTACHMENT
(With Sign Present)
Items not shown same as "Side Elevation" of "Handrail Details"



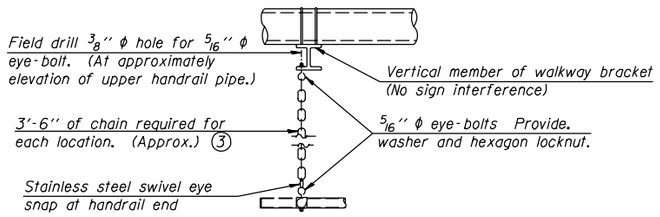
SIDE ELEVATION



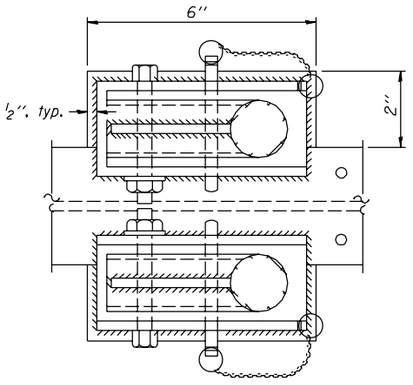
SECTION P-P



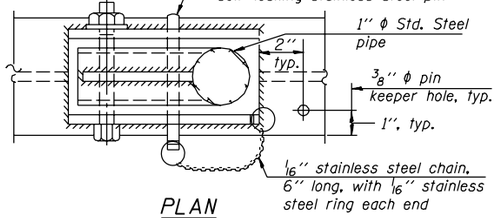
ALTERNATE SAFETY CHAIN ATTACHMENT
Details not shown similar to "Safety Chain" Details
(Walkway omitted for clarity)



SAFETY CHAIN
One required for each end of each walkway.



PLAN AT HANDRAIL JOINT
Details not shown same as "PLAN"



PLAN
DETAIL E HANDRAIL HINGE

(3) 3/16" Type 304L stainless steel chain, approximately 12 links per foot.

OVERHEAD SIGN STRUCTURES
ALTERNATE STEEL HANDRAIL
DETAILS FOR DMS

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

- 200
EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

NUMBER	REVISION	DATE

OS-S-11-DMS 7/01/2006